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To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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## FINDINGS OF THE NICARAGUA CANAL COMMISSION.

No report on the Nicaragua canal has yet been made by the commission sent out to investigate the matter, of which Admiral Walker is president and Prof. Haupt and General Haines are members. But the testimony of the members before the Senate select committee, on June 15-17, has been printed, and indicates clearly some of the results of the investigation. The commission was engaged most of four months in personal examination, having with it a party of about 250 men, of whom about eighty were engineers, with a highly competent geologist and hydrographer and the best instruments for scientific investigation, including ten boring outfits, and the work is still in progress. But the investigation, which seems to be the most thorough of the many which have been made in that field, has already confirmed the accuracy of the Menocal survey, so far as it went, and of much information obtained by later inquiries, while it has brought to light interesting and important points which appear highly favorable to the project.

It is found by accurate examination that the rocky formation which had been supposed to make necessary an extensive and costly breakwater, in order to form a secure harbor at Brito, does not exist. Admiral Walker testified, the other members agreeing, that a safe and ample harbor could be constructed by mere dredging of the mangrove swamp below the Brito headland, with a comparatively short jetty running out from it. Next, as to the wide variation in the depth of Lake Nicaragua, formerly said to be as much as 15 feet, which formed an important difficulty in plans heretofore considered, the commission finds no evidence that the variation is so great, and its competent men believe that the task of regulating the flow of water will be much diminished, in part by controlling the connection with Lake Managua, and possibly by controlling a stream which can be diverted into it.

More important still is the conclusion, in which the commission appears to be unanimous, that the great risk and

cost of unusually high dams on each side can be avoided. On the west side the opinion seems to favor a direct canal not connected with the river. On the east side there is suggested a dam at Machuco, dropping some 25 feet at that point, and thus bringing within a moderate height the dam at Ochoa. Borings have cleared away an important element of doubt by revealing solid rock bottom at both points where the important dams are required, and also at the San Francisco embankment, though it may be found more desirable to avoid that expensive part of the work entirely by a deeper cut across the divide. No final conclusions have been reached, nor has all the needed information been obtained on these points, but the commission seems to be entirely satisfied that the work can be completed with less risk and probably less cost than previous estimates have indicated.

The question of harbors on the lake was investigated, with the discovery that a better location can be chosen on the east side, saving two or three miles distance. At Greytown the difficulties can only be surmounted by a jetty of about 3,000 feet, with a shorter one on the opposite side, and by more or less constant dredging, such as is found necessary at the harbor of Galveston, the mouth of the Mississippi, and Port Said, but the commission holds it perfectly practicable to make safe harbors at all points needed. No definite estimate of cost has yet been reached, but Prof. Haupt expressed strongly the present belief that the work could be completed for \$90,000,000, while the other commissioners spoke of \$125,000,000 and \$140,000,000 as the possible maximum. But it is interesting to note that all of them consider any possible difference in the cost, even if it should amount to \$200,000,000, quite insignificant compared with the enormous value of the canal to this country and to its commerce.

## NAVAL EQUIPMENT.

The U. S. Navy estimates for the fiscal year exceed \$47,000,000, of which the equipment bureau takes \$6,615,000, public works, yards and docks, \$5,863,000, machinery construction, \$5,592,000, armor and armaments, \$4,000,000, and the ordnance bureau, \$2,500,000. These figures are record ones for times of peace, and bring the current year's total expenditure, including the war emergency vote, to over \$120,000,000, or, say, £24,610,000, at \$4.86 to the £1.

## DEVELOP THE STEEL TRADE.

What the Government of the United States has done to develop the great steel trade of northeast Ohio, Western Pennsylvania and the Chicago district, is realized when we know that the work cost the federal treasury more than \$40,000,000 in round figures. The deepening of the shallow channels of the Great Lake water line from 9½ feet in 1850 to an average of 20 feet in 1898, was not all for the benefit of the iron trade. It has given cheaper bread, and coal, and other essentials, to millions, through lowering of the freight cost of them, to and from the west. The freight rate the whole length of the lake line, from Duluth to Buffalo, was 4 mills a ton per mile. It is now six-tenths of a mill per ton per mile. And this has been a potency in making "bread and meat" cheap in the swarming east, the value of which in the general national economy cannot be less than the making of our country the prelate in the iron trade of the world.

THE Italian cruiser Puglia, recently launched at Tarentum, is to be fitted with horizontal triple-expansion engines, and her boilers are to be fitted for burning coal or oil as fuel. The vessel is 274 ft. long by 41 ft. 8 in. beam; the displacement being 2,550 tons, and the speed under natural draught is to be 17¼ knots, the engines indicating 4,200 horse-power. She will carry 26 guns, 2 Maxims, and 2 torpedo tubes.

## UNITED STATES TONNAGE.

Complete returns show that documented American merchant shipping on June 30, 1898, comprised 22,705 vessels of 4,749,738 gross tons, compared with 22,633 vessels of 4,769,020 tons on the like date in 1897. The decrease of 19,282 tons is more apparent than real, as 11,000 tons of this amount is due to dropping fractions of tonnage in the accounts, and 66,713 tons were sold to the Navy and War Departments to carry troops, supplies and provisions and have merely changed employers.

The total steam tonnage amounts to 6,712 vessels of 2,371,923 tons compared with 6,599 vessels of 2,358,558 tons for the previous year. The vessels sold to the government were all steam vessels, so the true increase is greater than the figures indicate. Sailing vessels have decreased from 1,904,153 tons for 1897 to 1,835,827 tons for 1898. Documented canal boats and barges amount to 541,988 tons compared with 506,309 tons for the previous year. The increase is chiefly in barges which are superseding sail vessels, especially in the coal trade.

Tonnage on the Atlantic and Gulf coasts has dropped from 2,647,796 tons for 1897 to 2,553,739 tons for 1898. The Great Lakes tonnage shows a slight increase, 1,437,500 tons compared with 1,410,103 tons.

The new Alaskan trade has increased the Pacific Coast marine from 439,012 tons to 496,767 tons. Western rivers have decreased from 272,109 tons to 261,732 tons.

New York State retains the first place with tonnage reduced from 1,331,743 to 1,299,825 tons, Michigan is still second with a reduction from 477,602 tons to 458,100 tons, and Ohio stands third with 395,618 tons, an increase of about 6,000 tons. The greatest increase is in Washington, from 97,796 to 152,167 tons, and Alaska from 3,824 to 9,755 tons. New England shows a large decrease, and the Gulf States an appreciable increase.

Vessels registered for foreign trade number 1,136 of 737,709 tons, compared with 1,230 of 805,584 tons for 1897. These figures are the lowest since 1832. The decrease is wholly in sail vessels of which 159 of 103,000 tons, or about 20 per cent., have been lost, laid up or gone into domestic trade during the year. Registered steam vessels have increased from 222,136 tons to 245,059 tons. Through the greater efficiency of steam vessels our fleet for the foreign trade does not show a decrease in carrying power.

The effect of the war is shown in the sale of 84 vessels of 35,411 tons to foreigners, compared with sales of 8,243 tons the previous year. The sales were chiefly due to high premiums on American vessels and cargoes, demanded by insurance companies during the brief period while mines and torpedoes were being placed in our harbors. The effect of the war is also shown in the admission by Acts of Congress of 27,824 tons of foreign vessels to American registry, chiefly for transport purpose. During the preceding eight years only 55,902 tons were so admitted.

## FOG SOUND IS CAPRICIOUS.

Special warnings to mariners concerning fog signals, published by the British Board of Trade, are as follows: "Sound is conveyed in a very capricious way through the atmosphere. Apart from wind, large areas of silence have been found in different directions and different distances from the signals, in some instances even when in close proximity to the sound signal. The mariner should not assume—1. That he is out of ordinary hearing distance because he fails to hear the sound; 2. That because he hears a fog-signal faintly, that he is at a great distance from it; 3. That he is near it because he hears the sound plainly; 4. That the distance from and the intensity of the sound on any one occasion is a guide to him for any future occasion; 5. That the fog-signal has ceased sounding because he does not hear it even when in close proximity.



## NEWS AROUND THE LAKES.

## DETROIT.

*Special Correspondence to The Marine Record.*

Alger Smith & Co. have sold the tug Torrent to Ben Bou-telle, of Bay City.

David Drullard, of Buffalo, has purchased the schooner Mineral State, of F. R. Straight, of Toledo.

J. W. Westcott has arranged with the steamer D. Leuty to tow the schooner Abram Smith the remainder of the season.

Two signal lights owned by Albert Desner, of 458 Fort street, were stolen from a boat at the foot of McDougall avenue.

Capt. Thomas Wilson, of Cleveland, J. J. Westcott and others have purchased the steamer Volunteer from Alger, Smith & Co.

The schooner Viola will be used as a light-ship over the gas main which was laid last week between Sandwich and Detroit by the Interior Construction Co.

President Campbell, of the D., B. I. & W. Ferry Co., said that it is probable a new and larger ferry steamer will have to be built to accommodate the Bois Blanc Island passenger traffic.

O. W. Furguson, Assistant United States Engineer, started at Gibraltar, Mich., Sept 20, to run a line through to Lakeport to establish the water level of the lakes and rivers for the Deep Waterways Commission.

The yacht Fannie R., recently purchased by the government, left Bay City Friday night in charge of Capt. John Stewart, for this port, but encountering hard weather she put in to East Tawas in a leaking condition, and must return to Bay City for recalking.

The steamer Peshtigo, sunk near Alpena after being in collision with the Roby, has been taken into port. No estimate has been made as to the extent of the damage. It is reported that one of the steamer's yawl boats drifted into Thunder Bay, and \$50 in bills was found in it.

R. E. Rispin, the insurance inspector, has placed pumps on board the sunken schooner Nassau. He reports the hull in good shape and expects to save a part of the cargo. A heavy gale has prevailed on Lake Erie during the past twenty-four hours, and a number of boats are sheltered here.

Judge Swan has announced his decision in the Roby-Florida case. These two vessels collided near Presque Isle in Lake Huron in 1897, and the Florida went down in deep water and has not been raised. The judge finds that both vessels were to blame, and that damages should be divided between them.

The steamer Minneapolis, which passed here on Wednesday, reported that both her anchors were lost in Thunder Bay during the southeast gale. The steamer anchored, and when she came to heave up the anchors could not release them from the bottom. The schooner Crete lost one anchor off Sand Beach.

The steamer George W. Roby, which was in collision with the steamer Peshtigo off Thunder Bay, Lake Huron, arrived here and went into dry dock for repairs. Her fore foot is gone and very little damage shows above the light water line. Messrs. Becker and Mack, managers of the steamer, came here to look after her.

A receiver has been appointed to take charge of the assets and management of the Frontier Iron Works, a corporation, and in order that creditors may be informed of the condition of the affairs of the corporation a meeting of said creditors will be held at the works of the corporation, foot of Chene street, Detroit, Mich., Friday, October 28, 1898, at 10 a. m.

A decree has been made here this week in the libel of the B. & O. Coal Co. against the steamer A. L. Hopkins, allowing the libellant \$296 with interest from November 26, 1897. An order is made for the condemnation and sale of the vessel, at six days public notice. From the proceeds, the costs are first to be paid including proctor's fee of \$20 to I. N. Huntsburger, then the claims allowed and all interviewing libels filed between October 30, and held good.

The Andy Johnson, the Naval Reserves' boat at Cleveland, has been sold to J. Harrington Walker, of Detroit, but really to various Canadian men living in towns opposite Detroit. An upper deck will be put on her and she will go into the passenger trade along the Canadian shore. The Andy Johnson is an old boat that did duty as a United States revenue cutter on the lakes for many years, and finally was sold by the government to the Cleveland Naval Reserves.

The six men left on the schooner Herschel, ashore on Sulphur Island reef, were rescued by the Thunder Bay life-savers. Capt. Thomas Clark was driven ashore alone in a yawl which broke adrift before the other members of the crew could get into it. The Herschel is on the rocks and is full of water. Her cargo of lumber was loaded at Alpena and was consigned to Koch Brothers, at Sandusky. Most of the deck load was swept overboard. It is thought the schooner can be floated.

Lieut. Commander Duncan Kennedy, U. S. N., who has been on duty as ordnance officer at the Norfolk navy yard for the past two months, has arrived in the city and received from Lieut. Commander F. O. Davenport (retired) the property of the 11th Light-House District. Commander Davenport has during that time been acting as assistant to Commander Hanford, of the 10th District, in looking after

the 11th. He came down in the tender Marigold in a heavy northeaster Saturday and says an inch of snow lay at Lime Island, Soo River, when he passed.

Judge Vance, of the Circuit Court, Port Huron, has handed down an important decision affecting much of the summer resort property at St. Clair Flats. The opinion is in the test suit of the state of Michigan against Adolph Sloman, the district attorney, tried in the Circuit Court there a short time ago to determine the ownership of the greater portion of the Flats. Judge Vance holds, in effect, that the state of Michigan has a paramount title to the property as contended for under the swamp land act of 1850, and that it is not open to squatter possession, or pre-emption from the general government. As nearly all the occupants of the property at the flats hold possession under squatter rights or the successors of squatters, the decision if approved by the Supreme Court, to which tribunal the case will be appealed, carries with it practically the ejectment of all the present owners, and vests the title with the state.

## CLEVELAND.

*Special Correspondence to The Marine Record.*

The steamer John B. Lyon is in dry dock here for some minor repairs.

The steamer H. W. Sibley, sunk in St. Clair River, Sunday, in a collision with the Lansing and Northern King, has been raised and taken into Port Huron, by the Saginaw. The bows are badly smashed in. Repairs will be made after the coal cargo is taken out.

The steamer Melbourne, which cleared for Montreal with a cargo of general merchandise on Monday afternoon, was unable to proceed, owing to the stormy weather. She succeeded in getting about forty miles on her course and was then compelled to put back to this port until the weather moderated.

Brokers say they could get \$1 on ore from the head of Lake Superior if they had the boats to offer, but everything seems to be taking grain. Shippers insist that they have very little wild ore to come down from Marquette or Escanaba, and are still offering but 85 and 80 cents respectively, from these ports.

The Mahoning mine, near Hibbing, practically closed down Saturday, but the shipping of ore will continue for a few days in lessening quantities. The mine has shipped about 520,000 tons for the season, a slight increase over the aggregate shipments for last season. The Penobscot mine is still shipping.

While the steamer Castalia was leaving Marquette on her last trip she collided with a tug and damaged one of her plates. A survey was held when she reached Ashtabula and it was decided that the damage would not interfere with her running the remainder of the season, when repairs can be made at the close of navigation if no casualty occurs previous to that time.

Countess Schimmelmarm addressed a large audience in Association hall on Tuesday evening. She appeared on the rostrum attired in a plain black costume in strict keeping with the simple life she leads. She chose no particular subject for her discourse, but gave an interesting talk on the beauties of God's creations and the relations each person and thing bears, one to the other.

Another company has entered the field to procure lake boats for use in the Atlantic coast trade. It is the Manhattan Steamship Co., of New York. The company is negotiating for vessels, but thus far the names of only two of the vessels under consideration are known, the Linden and Runnels, both steamers. It is also said the company has about concluded negotiations for five barges.

The Cleveland built yacht, formerly the Comanche, now the auxiliary cruiser Frolic, will be returned to the Great Lakes. The Illinois Naval Reserves are to have her for a training ship, instead of the cruiser Wasp. The Wasp, it appears, has too deep a draught for the Canadian canals. Forward she draws nine feet and aft twelve. The canals will not allow the passage of anything over nine feet. When the Wasp was selected it was thought she could be lightened enough to admit of her passage.

The Ohio Naval Reserve brigade will be continued in existence, and will be reorganized. Captain George H. Gibson, of the Tenth Ohio Infantry, who is lieutenant junior of the first division of the Cleveland Naval Reserve battalion, is authority for the above statement. The government would not permit the Ohio Naval Reserve brigade to get into the Spanish-American war as an organization, so the Toledo and Cleveland battalions went into the Tenth Ohio infantry, each division as a company. The Gatling gun battery element, which controlled the Cleveland battalion and fathered it, has now practically dropped out, and has no further interest in the organization since the sale of the steamer Andrew Johnson. The Gatling Gun Battery Association, it is said, wants nothing more to do with the Naval Reserve branch of the National Guard. Captain Gibson said: "The Cleveland Naval Reserve battalion will spring into existence again as quick as the Tenth regiment gets out of service. I have worked too hard in getting the organization started to see it dropped now. The government, I have learned from reliable sources, intends to place the Naval Reserve organization under its own supervision, when the National Guard of the country is reorganized. The government further intends to fully equip and support the Naval Reserves, and furnish each organization with one of the auxiliary ships of the navy, and also to furnish competent instructors to drill the men."

## BUFFALO.

*Special Correspondence to The Marine Record.*

The passenger steamer City of Buffalo, was delayed for three hours by a blockade here on Monday night.

All the boats that grounded in the river, floated Tuesday without injury. The water in Buffalo river is still low. A large number of grain cargoes were found to be wet, through the vessels taking the ground, the amount of damaged grain running from 400 to 1,100 bushels.

The steamer Katahdin left Ogdensburg for Montreal on Wednesday morning, drawing six feet four and six feet six inches. The Simon J. Murphy will probably get away on Thursday. The W. D. Alverson and Becker went down the rapids safely and reached Montreal all well.

The schooner Francombe took a sheer and collided with the breakwater crib on Wednesday. She is stove in badly and several frames are broken. The schooner was being towed up from Tonawanda by the steamer Stafford and three tugs, and was loaded with pig iron. When abreast of the crib she took a sheer and struck it. The tug Cascade brought her into the harbor and she now lies in Blackwell canal with her hold full of water.

There is an unusually heavy movement of package freight at present, even for this season of the year, when dealers are laying in an extra stock for the fall trade. Flouring mills in the northwest are running full time and marine men here, who make a specialty of handling grain products, are counting on an enormous business for the balance of the season, even if it is not continued by rail through the winter. As a result of the increasing demand for tonnage, the transportation companies held a meeting in Minneapolis this week, and a dispatch received by a line manager here announces that the rate will be advanced on flour on November 1st 2½ cents per 100 pounds. This, it is argued, is only in keeping with the advanced grain rate from Chicago and Duluth, and will be accepted by shippers without protest.

An expected arrival here Thursday from Duluth is the new package freight steamer Troy, of the Western Transit Co.'s line, having on board the largest cargo of flour ever carried on the lakes. The loading was completed on Monday and on the same evening the big boat started down the lake on the record-breaking trip. The Troy's cargo consists entirely of flour and amounts to 4,852 tons, equal to 323 carloads of the largest size. Figures show that this bulk, if loaded for shipment by rail, would require a train 12,113 feet in length, occupying over two miles of track. The value of this enormous cargo, reckoned on a basis of \$4 a barrel, which is lower than the wholesale quotations on the quality carried, is \$194,080. At the prevailing rate of transportation the sum received by the New York Central railroad, of which the Western Transit Co. is the lake line, for moving this single cargo from Minneapolis to New York, will be \$21,864.

"Every lumber dealer in Buffalo will be well satisfied with the advance in rates on lumber," said a prominent dealer to the Courier. "We appreciate the fact that with the advance in grain freights it is impossible to obtain proper tonnage for lumber at the old prices. Then, again, sailors' wages must be advanced. Of course, it is understood that the captains, mates and engineers are employed by the season, so that so far as they are concerned, wages will be equal, except in the matter of sailing vessels. From a prominent point in Buffalo, I noticed a large fleet of sail vessels going up the lakes, a sight most infrequent during the last few years. I imagine that the said vessels are again in evidence with the advance in tonnage, both up and down. Withdrawal from the lake trade of so large a tonnage for Atlantic coast business may have stimulated freights to an extent, yet the legitimate demand for freight tonnage has a greater effect in advancing carrying charges than the withdrawal mentioned." "We have 7,000,000 feet of lumber on Lake Superior," said another dealer when questioned regarding the effort to advance the lumber rate to \$2.50, "which if rates should go to \$2.50, would be left to winter where it is, so that while an increase might seem at first view to be an advantage to the carrier, in the end it would prove a disadvantage by reducing the amount of shipments materially. We will carry some lumber at the present advance, but the condition of the market will not compel us to move the stock should rates go higher. There are many other dealers similarly situated and you can see what would be the result of forcing up the rate to \$2.50. It is the prevailing view of lumbermen that with the present rates for carrying on the lakes, the price of lumber must advance. An indication of this is the fact that some large offers of lumber made by Superior dealers a few days ago have been withdrawn."

Forty-three fish and oyster concerns, including the control of the fisheries on the Great Lakes, have combined under an Illinois charter to A. Booth & Co., with a paid-up capital of \$5,500,000, and general offices in Chicago, with branches at Boston and New York. W. Vernon Booth, Chicago, president; A. E. Booth, Baltimore, vice-president; W. G. Robbins, Buffalo, treasurer, and E. D. Carter, Erie, secretary.

A DISPATCH from La Crosse, Wis., says: A. M. Arpin of the Arpin Lumber Company, at Arpin, Wis., bought 75 teams hired over 100 men for logging operations in the Grand Rapids district. All lumber companies in northern Wisconsin and Upper Michigan are planning to carry on unusually heavy logging operations the coming winter. E. Horner and Sawyer & Austin have sent several score of teams and dozens of crews north some weeks ago.



## CHICAGO.

*Special Correspondence to The Marine Record.*

The Graham & Morton Transportation Co.'s steamer City of Milwaukee, which went out of commission on Saturday Oct. 15th, had made 170 round trips between Chicago and St. Joseph since she commenced running on June 4th last.

The barge Churchill, loaded with ore in tow of the Majestic from Duluth, sank in the rough water off Waukegan on Saturday last. Copt. Patrick Kane, of Detroit, and deck-hand John Hansen were drowned. The barge was valued at about \$10,000.

The steamer Langel Boys arrived Friday morning. She had lost nearly 100,000 feet of her deck-load of lumber. Her consort, the Comstock, which had parted her tow line when off Racine the previous night, arrived under sail later in the day with a considerable portion of her deck-load of lumber lost.

Capt. M. G. McIntosh, of the steamer Majestic, bound for South Chicago, called into Chicago Friday night, to bring in the members of the crew of the barge Churchill which he had rescued, and to report the loss of the Churchill and her captain and one member of the crew when she went down off Waukegan at 1 p. m. Friday.

"I have figured it out carefully," said D. T. Helm, "and I have come to the conclusion that the boats that have gone to the Atlantic would have carried 500,000 tons of freight for the remainder of the season. The effect of taking away so much tonnage will be more marked for a fraction of a season than if it had gone last spring, and shippers could have calculated upon it. As it is, they are suddenly deprived of a large fleet to pick from, and they will have to pay a good deal more for vessels."

## FLOTSAM, JETSAM AND LAGAN.

St. Lawrence steamboat men have inaugurated a movement for a better system of lights and buoys for the river.

The Manhattan Steamship Company, of New York, has secured five steam barges from the lake for coastwise work.

The tug C. F. Mischler, was launched on Monday. This tug was built at the Deveny shipyards in Ashtabula for Captain Jacob Pfeister.

The body of Capt. Anderson, of the schooner J. V. Taylor, who recently fell overboard from his vessel, was picked up on the shore of Green Bay.

The new steel steamer Troy of the Western Transit line loaded 47,000 barrels of flour at Duluth on Tuesday; this is the largest cargo of flour ever carried on the lakes.

John B. Plunkett, deck-hand on the steamer Desmond, jumped overboard off Au Sable, on Monday morning. He is believed to have been insane. His parents reside at Meadford, Ont.

The steamers C. S. Parnell and W. L. Frost, both bound down, were in collision abreast of Mackinac City Saturday evening. They both received a general shaking up, but neither steamer was much damaged.

On the sealing schooner Viva, which arrived at Victoria, B. C., from Alaska, are three Scandinavians who have made the trip from Lake Bennett, Alaska, via St. Michael, in an open boat, a distance of 4,000 miles.

The controlling interest in the Lorain Steel Company, (the Johnson works,) has been sold to the Federal Steel Company. The purchase amounts to two-thirds of the stock of the Lorain company. The works will be enlarged.

The Juragua Iron Co., at Santiago, has shipped by the steamship Newlyn a cargo of iron ore consigned to the Maryland Steel Co., Baltimore. This is the first shipment of iron ore from Cuba since the beginning of the Spanish-American war.

Third Assistant Postmaster-General Merritt, in his annual report, recommends immediate negotiations with the postal administrations of England, Germany and France, to reduce the international postage rates to 2 cents a half-ounce or fraction thereof.

The schooner Penokee, of Toledo, is preparing for a voyage to Porto Rico. The schooner has received new gear, new sails, and donkey engine. She will load illuminating oil at Toledo for Montreal and at Montreal she will take on a cargo of lumber for Porto Rico.

A steam launch belonging to the receiving ship Franklin, towing a cutter, was run down near the Norfolk, Va., navy yard, by the tug Pioneer. Aboard the launch and cutter were fourteen persons, including several women, and as the former sunk she carried the cutter down with her. J. C. Pillsbury, a private of marines, was drowned.

It was the whaleback steamer Colby instead of the Colgate that sunk the schooner Nassau near Amherstburg, Ont. The captain of the Nassau reports that he left the Nassau resting easy on the bottom, with the cabin above water. He says that the Colby blew the whistles and he gave the orders to the wheelman to keep the same course, as it was too late to avoid a collision.

The new steel ship for which the keel has just been laid in the yard of Arthur Sewall & Co., at Bath, Me., will be appropriately called the Arthur Sewall, says the Marine Journal. This gentleman has certainly done sufficient to advance the interest of the merchant marine to warrant his having his name in golden letters on the stern of the largest American ship that floats the ocean.

The Post Intelligencer, of Seattle, says one of the results of the survey of the mouth of the Yukon river this summer by Capt. Pratt, of the coast and geodetic survey, is to add an area of 2,500 square miles to Uncle Sam's domain. Capt. Pratt, found that the south mouth of the Yukon empties into Bering sea twenty miles further west than has been supposed. In addition to this it was found that the whole coast line from Cape Dyer almost to St. Michael is further west than is shown on the maps. The strip to be added embraces about 2,500 square miles.

A newspaper man was inspired, after looking over his list of delinquent subscribers, to compose the following, says the Troy Times: "How dear to our heart is the old silver dollar, when some kind subscriber presents it to view; the liberty head without necktie or collar, and all the strange things which to us seem so new; the wide spreading eagle, the arrows below it, the stars and the words with the strange things they tell; the coin of our fathers, we're glad that we know it, for some time or other 'twill come in right well; the spread-eagle dollar, the star-spangled dollar, the old silver dollar we all love so well."

The Coast Signal Service, established at the beginning of the war, to watch for Spanish craft and storms, will probably be maintained, for it has shown its efficiency in scenting the West Indian blizzard from afar and warning shipping people and others along the coast of approaching danger. Most of the disastrous storms on the Atlantic are hatched in the West Indies, and with the increased commerce which will develop with that region it is no more than fair to encourage this enterprise with the same protection which is afforded lake commerce. The value of the Lake Signal Service cannot be estimated, but every captain has learned to rely upon it and credit it with the prevention of many disasters.

The case of a member of the crew of the steamer John Mitchell against Adolphus Cole and Chas. Muir, second mate and watchman, respectively, came up before Commissioner Perkins at Superior, Wis., on Saturday last, but was dismissed on a technicality. The men were arrested a short time after the arrival of the boat at the head of the lakes, and held for trial, on a charge made by Roman Doyes, a deck hand, who claimed maltreatment on the part of the prisoners, and showed some bad bruises in testimony of the facts of the case. The affair is considered a crime on the high seas and is a high offence against the laws of the United States. The conviction for such crimes is followed by a punishment of three years in jail or a fine of \$3,000.

## DETROIT MARINE POST OFFICE.

LETTERS REMAINING ADVERTISED IN DETROIT, MICH., POST OFFICE, OCTOBER 20, 1898.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Bostwick Murray, Str. Sitka	Gray Alf., Sch. Connelly Bros.
Bothwell R. J., Str. Nicaragua	Glendon Thos.
Barnes Edgar E.	Hackett Tom
Burns James, Str. Nicholas	Henry Edw., Str. Pawnee
Berg Harold	Jones Paul, Str. Vega
Best Capt. Geo., Sch. Croshwaite	Jennings Ewd., Str. Pioneer
Burns P. J.	Kernahan J. C., Str. Macy
Brown Capt. Chas., Sch. Montmorency	Lyman Jno. W., Str. Sheriffs
Cahill Matt, Str. Corona	Morrow Geo. W., Str. Rees
Cottrell F. Richard	Phillips Sherman, Str. Pasadena
Conlin Capt. Frank, Sch. Rogers, 2	Richter Wm., Str. Sacramento, 2
Cobel Chas., Str. H. Brown	Starley Chas., Str. Thomson
Dunn Jim, Str. Pope	Stewart R. C., Str. J. E. Owen, 2
Edwards Frank, Sch. Montmorency	Tucker Byron, Sch. Montmorency
Eales Wm. P., Str. Sheriffs	Van Wormer Mark, Sch. Montmorency, 2
Flenders Wm., Str. Vega	Wilson Louis, Str. Pasadena, 2
Forsyth James, Sch. Rogers	
Gowie Wm. B., Sch. Rogers	

F. B. DICKERSON, P. M.

## ADDED TO OUR FLAG.

The Northern Pacific Steamship Co. will, in a certain event, place under American register the six British steamships which it operates to China and Japan. These include the transport Arizona, which the company sold to the government in July, when available steamers for transport service were scarce. Vice President Lamont, of the Northern Pacific Railroad, and others interested, secured the passage of a law by Congress that permitted the company to place its trans-Pacific liners under the American flag, this privilege being desired in view of the prospective heavy traffic between the United States, Hawaii and the Philippine Islands. The company only awaits the decision as to whether the United States will keep the Philippines to change the registry. Should the Philippines be returned to Spain the British registry would be retained. The steamers concerned are the Tacoma, Olympia, Victoria, Arizona, Columbia and Argyle.

## MORE LAKE BUSINESS.

The Manhattan Steamship Co., of 5 to 11 Broadway, New York, has secured five large steam barges from vesselmen on the Great Lakes for use in the coastwise trade. Counting those recently chartered by the Atlantic Transportation Co., also of New York, this makes forty-nine lake vessels that have been engaged to leave the lakes and trade between the big ports along the coast. The five ships obtained by the Manhattan Steamship Co. will be sent to Philadelphia to fit them for the coast trade. The names of the boats have not yet been made public, but two of them are understood to be the Linden and H. E. Runnels, owned by the Jenks Ship Building Company. The insurance valuation of the H. E. Runnels is \$45,000, while that of the Linden is \$62,500. The boats will start on their trip to the Atlantic at an early date. The sending of these vessels to the coast is proving a boom to vesselmen on the lakes, freight rates being firmer and the competition and rivalry lessened.

## GRAIN ELEVATORS BUSY AT BUFFALO.

The grain elevators at Buffalo are getting behind their business and if the big fleet gets bunched together there will be much delay. Of course the elevators are not to blame. They can handle all that comes, but the cars are short, and this soon makes the elevators helpless. None of them have taken more than their share lately, but the New York Central's, which have been holding vessels back close to a week for some little time. This is all the more aggravating because all the boats of that line are put in for unloading as soon as they get in, paying no attention to their turns. We are getting more than 1,000,000 bushels of grain a day now, about half of which is wheat. People who are used to handling only the small cargoes of less than 100,000 bushels have no idea of the difficulties attending the unloading of one of the 400-footers, sending them from one elevator to another, and sometimes outside to wind before they can get up to a house at all. If they unload in a slip and another boat lands opposite the end of it, there is trouble in getting out. The shortage of 700 bushels in the Duluth cargo of the Superior City has not been found yet, and though the parts of the cargo have not all been weighed over yet, it is pretty certain that the mistake is in Duluth, as there has been no corresponding over-run here to account for it.

## COLLISION ON LAKE HURON.

As a result of a collision in mid-lake on Saturday morning, the steamer Peshtigo lies sunk just off the mouth of the river at Alpena. The Peshtigo, which was bound down with lumber from the Soo to Toledo, met the Roby, bound up, off Thunder Bay Island. The two boats collided with terrific force. The Peshtigo was struck just forward of the engine room, and commenced to leak badly. Her captain at once headed her for Thunder Bay and called the aid of a tug. He was unable to sail the steamer into the harbor, however, but beached her half a mile off the river. She lies in 22 feet of water, with her decks just awash. The bows of the Roby were badly stove in. The crew of the Peshtigo lay the blame for the accident on the officers of the Roby. They say they saw her coming and blew two signals as a passing signal. The Roby did not answer, but ran into the Peshtigo at full speed. The night was clear, and the lights on both boats were plainly visible. The Peshtigo had a cargo of 900,000 feet of lumber. The Roby version of the collision will be heard later.

## WHY THE SKY LOOKS BLUE.

Did it ever strike you to inquire why the cloudless depths of sky above us are so delicately blue? It isn't that the gas we call air is in itself blue. So far as we know it is transparent and absolutely colorless. No; the blue comes from reflected light. Air is never pure; you couldn't live in it if it were. Countless millions of tiny particles, chiefly of water, are always suspended in it, and these arrests the free passage of light. Each particle has a double reflection—one internal and other external—and so the reflected rays suffer the usual result of what is called "interference," and show color.

You will notice that the sky appears much bluer if you look straight up than if you look across toward the horizon. The reason is that in the first instance you are naturally looking through a much thinner layer of air than in the second. If there were no air, and consequently no watery vapor, and nothing to interfere with the free passage of light, even at midday, the sky above would look perfectly black, and all the stars plainer than they do now at midnight.—Boston Herald.



## MARITIME LAW.

## THE RITA.

(District Court, S. D. N. Y., June 27, 1898.)

**SALVAGE—DELAWARE BREAKWATER—EXTREME PERIL—SHORT SERVICE.**—The Rita having drifted within 50 or 100 yards of Delaware breakwater in a northeast storm, and being in extreme peril in case of any increase in the storm, was rescued by the tug Protector in a few hours' service. One-eighth of the values saved was awarded, being \$3,466.

This was a libel in rem by Wm. J. Minford and another against the bark Rita, her cargo and freight, to recover compensation for salvage services.

Brown, District Judge. The salvage compensation claimed in the above libel is for services rendered to the bark Rita by the steam tug Protector in the forenoon of April 28, 1898, in coming to the relief of the Rita not far from the east light-house at the Delaware breakwater during a severe storm, and towing her inside the breakwater. The towing service was altogether from one to two hours, from 9:30 to 11:30 a. m., although the tug lay by the Rita during the afternoon until about 6 p. m. A severe northeasterly gale had been raging for about two days previous. The tug Protector bound north with a tow had put into the Delaware breakwater two days before. The Rita had come to anchor about a half mile outside of the breakwater, and up to midnight, preceding the salvage service, she had drifted to within about 50 or 100 yards of the breakwater, having lost most of her anchors. She had set signals of distress and was in a perilous position. Had she continued to drift and reached the breakwater wall before the storm subsided, there is no doubt that both ship and cargo would have been a total loss and that more or less of the crew must have lost their lives. In her behalf it is strenuously claimed that she was not drifting after midnight preceding the salvage service, and that her starboard anchor, the force of the storm having somewhat abated, was sufficient to hold her. The libelants have given some testimony to the effect that she was still drifting in the flood tide at the time when the Protector went to her relief at 9:30 a. m. The wind was then hauling to the northward and by the next morning it was northwest. This favored the Rita, and if not drifting when the Protector reached her, she would doubtless have escaped running upon the breakwater without help.

As respects the very important but controverted question whether the Rita was drifting when the Protector reached her, I am inclined to give superior credit to the testimony of the Rita's master and officers. Their opportunities for observing and knowing the exact truth were far superior to those of the libelants' witnesses, most of whom were not in a position to judge upon this point with accuracy. Had the Rita moreover been observed by the Protector to be drifting towards the shore from about 5 o'clock in the morning, when she first became visible to the Protector, it is not probable that the Protector would have delayed making earlier and more persistent endeavors to reach her. It is said that the Protector waited until the sea somewhat abated; and this partial subsidence of the storm makes more probable the truth of the testimony of the officers of the Rita, that she was not then drifting.

The situation of the Rita was nevertheless one of extreme peril, in case the violence of the storm should be renewed; and the help rendered to her was most timely and efficacious. She was rescued without loss.

The value of the Protector was \$20,000. She was insured for only about \$12,000. The value of the Rita, with stores and freight, was about \$5,000; and her cargo of sugar was valued at \$22,727, all of which must have been a total loss had she drifted upon the breakwater. In rendering the salvage service the Protector sustained no loss; but she was exposed to some sea perils. Taking all the circumstances into account, I think an allowance of one-eighth of the values saved will be an appropriate, liberal and just compensation, and in consonance with the principles on which salvage awards should be based, as expressed by Mr. Justice Bradley in the passage so often quoted from the case of *The Suliste*, 5 Fed. 102. Of the award, one-third should go to the master and crew, and the residue to the owners. One hundred dollars should be first paid to the master from the one-third, and the rest divided among the master and crew in proportion to their wages.

Decree accordingly with costs.

## WHITMIRE V. COBB.

(Circuit Court of Appeals, Fifth Circuit, May 24, 1898.)

**SALVAGE—WHEN ALLOWED.**—Timber found drifting with the tide, on deep water, in a harbor, and out of control of the owners, is the subject of salvage.

**SAME—AMOUNT OF RECOVERY.**—Upon proof that the

public custodian of lost timber, who, himself was entitled to demand 75 cents per stick for timber recovered, paid regularly to salvors 50 cents per stick for timber turned over to him, the court allowed a salvor 50 cents per stick as against the owner of the timber. Held no abuse of discretion.

Appeal from the District Court of the United States for the northern district of Florida.

On July 7, 1896, a storm swept over the western part of Florida, taking in its course the mouths of Escambia river and Escambia Bay, an arm of Pensacola Bay. At Ferry Pass, on one of these mouths of the river, there were several thousand sticks of timber gathered together, which were cast adrift by the storm, and carried by the wind and tide out into the waters of Escambia Bay. Two hundred and forty-one of these sticks, scattered along the eastern shore of Escambia Bay near Garcon Point, for a distance of 1½ miles, were collected together by the appellee, N. H. Cobb, assisted by his three children and one man. According to his statement, Cobb worked three days in gathering two hundred pieces, and collected a balance during a period of two weeks' time. The man employed by Cobb to assist him worked one-half day. The timber was afterwards taken by Whitmire, the appellant. Thereupon the appellee filed a libel against the timber in the United States District Court for the northern district of Florida. Whitmire interposed a claim and filed his answer. Upon the hearing upon the merits the District Judge awarded Cobb, the appellee, the sum of \$120.50, or 50 cents per stick, as salvage, and the costs. From this decree Whitmire appeals to this court, assigning error as follows: "The District Judge erred (1) in rendering a decree for the libellant; (2) in rendering a decree for so much as \$120.00 in favor of the libellant and against the claimant; (3) in rendering a decree of any sum whatever in favor of the libellant against the claimant; (4) in not dismissing the libel."

W. A. Blount and A. C. Blount, for appellant.

B. C. Tunison, for appellee.

Before Pardee and McCormick, Circuit Judges, [and Parlange, District Judge.

Per Curiam. The assignments of error raise two questions: Is the case made by the libel one of salvage? And whether the amount allowed by the District Court is erroneous, because of excessive.

Timber found drifting with the tide on deep water, in the harbor, and out of control of the owners, is the subject of salvage. *Bywater v. A Raft of Piles*, 42 Fed. 917. See also, *Muntz v. A Raft of Timber*, 15 Fed. 555; *A Raft of Spars*, 1 Abb. Adm. 485, Fed. Cas. No. 11,529; *Fifty Thousand Feet of Timber*, 2 Lowell, 64 Fed. Cas. No. 4,783. Following these decisions, we hold that the case made by the libel is one of salvage.

As to the amount allowed: While we are of the opinion that the salvage services in question were of a low order, and would have been adequately compensated on the basis of work and labor, yet we cannot hold that the amount allowed was so manifestly excessive as to justify its revision on appeal. The District Judge acted upon proof that the public custodian of lost timber and lumber, who himself was entitled to demand and receive for each stick of timber recovered and delivered, 75 cents, paid regularly to salvors of timber 50 cents per stick turned over to him. While the price paid by the public custodian was arbitrary, and not based upon services actually rendered, yet we are not prepared to say the District Judge, in adopting it, proceeded upon a wrong principle, or abused the discretion vested in him. The decree appealed from is affirmed.

## VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo .....	1,094,000	1,886,000	1,103,000	199,000	766,000
Chicago .....	1,810,000	11,665,000	1,023,000	184,000	134,000
Detroit .....	121,000	140,000	13,000	35,000	92,000
Duluth and Superior .....	2,376,000	1,097,000	114,000	53,000	439,000
Milwaukee .....	35,000	.....	.....	8,000	180,000
Montreal .....	146,000	26,000	471,000	26,000	12,000
Oswego .....	.....	31,000	.....	.....	19,000
Toledo .....	330,000	206,000	69,000	17,000	.....
Toronto .....	21,000	.....	5,000	.....	9,000
On Canal .....	66,000	2,015,000	291,000	.....	262,000
Grand Total .....	14,598,000	24,563,000	6,080,000	1,308,000	2,750,000
Corresponding Date, 1897 .....	23,930,000	40,497,000	14,882,000	3,160,000	3,407,000
Increase .....	2,388,000	2,361,000	611,000	590,000	431,000
Decrease .....	.....	.....	.....	.....	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

## NOTES.

THE Russian navy will be increased this month by the launch of the ironclad *Osliba*, the cruisers *Diana*, *Pallas*, and *Aurora*, and the destroyer *Amur*, all of which are under construction at St. Petersburg.

THE primacy belongs to the nation that can produce the cheapest pig iron, in commanding volume. This implies the cheapest machinery, and transportation, and these make possible the conversion of raw materials into articles of utility at the lowest reachable cost.

PROFITING by the lessons of Santiago, Admiral Palumbo, the Italian Minister of Marine, has sent a circular to all the constructors at the naval arsenals, urging them to use as little wood as possible in fitting up their ships, and recommending the use of aluminum wherever possible in the interior of battleships, in order to secure both lightness and incombustibility.

THE continued demand for the treatise on "Navigation and Nautical Astronomy," by Prof. J. H. C. Coffin, late professor of astronomy, navigation surveying at the Naval Academy, has induced the publishers, D. Van Nostrand & Co., New York, to issue a new edition, which has been thoroughly revised and brought down to date by Commander Charles Belknap, U. S. N., who bases his examples on the ephemeris of 1898. Commander Belknap being called to Manila while the work was in progress, the task of reading the proofs was entrusted to Lieut. E. H. Tillman, U. S. N., assistant instructor in navigation, U. S. Naval Academy. The work is neatly printed and is illustrated by a variety of diagrams. The book which is practically a new one, is sold for \$3.50.

THE Carnegie Steel Company, Limited, has issued a book of photographic plates giving views of their works, armor plates of their manufacture, showing the effect of tests at the proving grounds, fine illustrations of some of our principal war vessels, completed turrets, and many other interesting details of their work. They are known to the public as the makers of armor plates by rolling as distinguished from hammering and squeezing, but this book gives several views of a 1,200-ton hydraulic forging press manipulating a 90 ton steel ingot. The machines in which the plates are planed, and the casting pits in which the ingots are poured from large ladles are also shown. The book is really an atlas of one of the most renowned developments of modern manufacturing skill. The success of the Homestead works in this department has given interest to the story circulated lately that the company would go still more largely into the business.

A METALLIC packing that works equally well on rods running in steam, air or fluids is obliged to be equally well adapted for locomotive, stationary and pumping engines, for marine service, and for a great variety of miscellaneous uses; for example, on accumulators, air compressors, ammonia pumps, hydraulic cranes, elevators, presses and pumps, sewage pumps and water motors. The Rigby frictionless metallic rod packing fulfills all those varying and diverse conditions, and is warranted not to grip nor cut the rod, and to work with almost no friction. It consists of a series of split rings, of suitable composition, which are closely fitted to the rod and held in position by a coiled spring bearing on the gland head. The stuffing box outside of these metal rings is packed in the usual way with special flexible packing, which is compressed by the gland rim. From this it will be seen that as the gland nuts are screwed down, the flexible packing is expanded laterally and brings the metal rings to close snugly about the rod. Prices, circular and information will be sent on application to the manufacturers, The Henry S. Mould Co., Carnegie building, Pittsburg, Pa., and sample orders will be sent on approval.

## OUR NAVAL LOSSES.

A tabulated statement is issued by the Navy Department this week showing the full extent of the losses and the number of wounded in the navy during the war up to the present time. These figures are remarkable and the small number of deaths during hostilities compared with the number lost by the enemy make a record that has rarely been presented in naval engagements. Seventeen men killed and sixty-seven wounded is the total loss suffered by the American naval forces from April last, when the blockade of Havana was ordered up to and including the withdrawal of the North Atlantic forces from Cuban waters. Eighty-four casualties in all is the naval record for the war, and there is no present likelihood that the numbers will be increased.



## TREASURY DECISIONS.

TONNAGE TAX ON BRITISH YACHTS AFTER APRIL 1, 1899.

TREASURY DEPARTMENT,  
BUREAU OF NAVIGATION,  
WASHINGTON, D. C., October 11, 1898.

To Collectors of Customs and others:

Your attention is invited to the following provisions of section 4,216 of the Revised Statutes, re-enacted February 5, 1897, with amendment:

Yachts belonging to a regularly organized yacht club of any foreign nation which shall extend like privileges to the yachts of the United States, shall have the privilege of entering or leaving any port of the United States without entering or clearing at the custom house thereof or paying tonnage tax: Provided, that the privileges of this section shall not extend to any yacht built outside of the United States and owned, chartered or used by a citizen of the United States, unless such ownership or charter was acquired prior to the passage of this act.

By chapters 44, 61 and 62 Victoria, on and after April 1, 1899, American pleasure yachts will become subject, in the ports of Great Britain, to an annual charge of one shilling per ton as light dues.

As the British government has thus declined to extend to American yachts in British ports the privilege now extended to British yachts in American ports, you are instructed on and after April 1, 1899, to require British yachts visiting your port to enter and clear at the custom house and to pay tonnage tax as imposed by law on merchant vessels.

EUGENE T. CHAMBERLAIN, Commissioner.

Approved, O. L. SPAULDING, Acting Secretary.

## LICENSES.

Mates of river steamers holding de facto licenses previous to 1892 may be licensed under act of 1898, upon oral examination.

TREASURY DEPARTMENT, October 11, 1898.

SIR:—Referring to your letter of the 6th instant, addressed to the Supervising Inspector-General, in which, referring to the provisions of department circular No. 53, March 26, 1898, which requires mates of river steamers to be examined "in writing" by the inspectors before they can be licensed under the provisions of the act to amend section 4440 of the Revised Statutes, you say there are some illiterate men here (New Orleans) "who class high as steamboat mates who are very anxious to know if the ruling cannot be modified so that they will not be debarred from following their regular profession."

In reply, you are informed that the rules of the Board of Supervising Inspectors since 1892 have required that "no original master's, mate's, pilot's or engineer's license shall be issued hereafter or grade increased except upon written examination, which written examination shall be placed on file as records of office of the inspectors issuing said license."

The rule quoted has all the force of statute law and cannot be either waived or modified by the department, but, as the case specifically referred to in your letter is that of a person who had performed the duties of mate under a de facto license for many years previous to the adoption of the rule, and as the legality of such license had not been questioned at that time, and the rule would not apply to his case unless made retroactive in its application, it is the department's opinion it should not in equity be made so now in this or similar cases of persons applying for legal licenses under the provisions of the act approved March 26, 1898.

You will, therefore, direct the local inspectors in your district, in the case of applicants for mates' license, who held de facto licenses previous to 1892, to issue the same, if satisfied from an oral examination that the applicant is qualified for the position. Respectfully yours,

O. L. SPAULDING, Acting Secretary.

MR. J. A. COTTER,

Sup. Insp. Tenth District, New Orleans, L. A.

## SHIPPING OF GERMANY.

Under date of June 17, 1898, Consul Monaghan, of Chemnitz, says:

The number of vessels going in and out of German ports is constantly increasing. The passenger ships, freight vessels, and large fishing boats numbered in 1896, the last year for which I find figures, 147,536, with a tonnage of 32,046,888, an increase of 13,706 ships and 600,000 tons over 1895. Compared with the shipping of twenty years previous, the figures show twice the number of ships and almost three

times as much tonnage. More important than these figures are those that show the number of ships that went in and out laden with the empire's products and bringing foreign raw materials; there was 83 per cent. increase in the number of laden ships, and 152 per cent. increase in the number of registered tons. As interesting as the foregoing are the figures dealing with ocean voyages of ships entering and leaving German ports. Of these there were, in 1875, 45,302 ships with 8,604,610 tons; in 1896, 82,268 ships with 36,179,455 tons; laden ships in 1875, 33,233 with 6,940,155 tons; laden ships in 1896, 67,635 with 32,810,956 tons. This is indicative of marvelous progress. The growth in one year (1895-96) is almost 10 per cent. Ships ply to Denmark, Russia, Brazil, eastern Asia, the west coast of South America, to Australia, England, India, Africa and North America. Economic writers call attention to the fact that the Empire, in its trade with South America, has emancipated itself from English ships. The greatest tonnage and largest ships are engaged in trade with England and the United States. If we are to take part in the trade with South America and with the East we must emulate this Empire in the matter of ships. Of all the ships that came into and went out of German ports in 1896, 72.4 per cent. bore the Empire's flag. Of the steamers, 68.3 per cent. were German.

## SHIPBUILDING IN THE UNITED KINGDOM.

From the returns compiled by Lloyd's Register of Shipping, it appears that, excluding warships, there were 598 vessels of 1,364,250 tons gross under construction in the United Kingdom at the close of the quarter ended September 30, 1898. The particulars of the vessels in question are as follows:

DESCRIPTION.	September 30, 1898.	
	No.	Gross Tonnage.
STEAM.		
Steel.....	519	1,352,547
Iron.....	51	8,869
Wood and Composite.....	2	141
Total.....	572	1,361,557
SAIL.		
Steel.....	8	1,020
Iron.....		
Wood and Composite.....	18	1,673
Total.....	26	2,693
Total Steam and Sail....	598	1,364,250

From December, 1896, the returns of Lloyd's register have shown a steady increase in the amount of tonnage under construction in the United Kingdom. By the end of 1897, the work in hand reached a total of 1,013,000 tons. These figures—themselves almost certainly without precedent in the history of the shipbuilding industry—are now exceeded by no less than 351,000 tons.

Of the vessels under construction in the United Kingdom at the end of September, 509 of 1,070,975 tons are under the supervision of Lloyd's register with a view to classification by this society. In addition, 31 vessels of 93,342 tons are building abroad with a view to classification. The total building at the present time under the supervision of Lloyd's register is, thus, 540 vessels of 1,164,317 tons.

The following table apportions the vessels now under construction in the United Kingdom to the countries for which they are being built, adding 26 sail vessels of 2,693 gross tonnage:

COUNTRY FOR WHICH INTENDED.	STEAM.	
	No.	Gross Tonnage.
United Kingdom.....	476	1,114,047
British Colonies.....	6	12,840
Austro-Hungary.....	3	10,680
Belgium.....	2	8,000
Brazil.....	3	728
Chili.....	1	2,553
China.....	1	1,290
Denmark.....	6	12,770
France.....	6	7,930
Germany.....	8	47,700
Holland.....	6	12,940
Italy.....	1	3,365
Japan.....	7	24,940
Norway.....	9	24,683
Portugal.....	2	4,089
Russia.....	11	26,489
Spain.....	1	2,400
Sweden.....	3	3,000
For sale, or nationality of owners not stated.....	20	41,131
Total.....	572	1,361,557

The following table gives the total figures for vessels under construction in the principal shipbuilding districts of

the United Kingdom. Each district includes places in the neighborhood of the port after which it is named:

DISTRICT.	DESCRIPTION.	September 30, 1898.	
		No.	Gross Tonnage
Belfast.....	Steam.....	20	164,110
	Sail.....	..	..
	Total.....	20	164,110
Barrow, Maryport & Workington.....	Steam.....	13	32,670
	Sail.....	2	300
	Total.....	15	32,970
Glasgow.....	Steam.....	131	294,887
	Sail.....	4	440
	Total.....	135	295,327
Greenock.....	Steam.....	61	187,929
	Sail.....	..	..
	Total.....	61	187,929
Hartlepool and Whitby..	Steam.....	28	81,580
	Sail.....	..	..
	Total.....	28	81,580
Middlesbro' and Stockt'n	Steam.....	37	107,630
	Sail.....	..	..
	Total.....	37	107,630
Newcastle.....	Steam.....	89	255,793
	Sail.....	..	..
	Total.....	89	255,793
Sunderland.....	Steam.....	54	175,814
	Sail.....	..	..
	Total.....	54	175,814

## A RESTRAINING ORDER.

On Saturday last, in the United States Circuit Court, at Cleveland, Judge Ricks allowed a restraining order against the City of Cleveland and numerous business corporations and firms preventing them from dumping earth and refuse in the lake without a special permit from the War Department. The order is one that will be read with much interest by the people living in cities along Lake Erie.

The restraining order goes into effect in five days from the time it was issued, and, in the meantime, all the corporations and firms who have been dumping refuse into the lake, can go to Col. J. A. Smith, Corps of Engineers, U.S.A. and obtain a permit to dump within certain described limits. Those who were made defendants in the suit besides the city and director of public works are: James Rooney, of Toledo, L. P. and J. A. Smith, the Cleveland Towing Company, the Pennsylvania Company, the Standard Contracting Company, W. A. McGillis & Company, and the Vessel Owners Towing Company. District Attorney Dodge appeared for the government, and Director of Law Norton and his assistant, Mr. Boyd, in behalf of the city. Mr. Norton thought that hardly anything could have happened so thoroughly inimical to the interests of the city as the restraining order, and Deputy director of public works Chard said he regarded the granting of the restraining order as the greatest blow the City of Cleveland ever had. Mayor McKisson did not think the matter so serious. It seemed to him that all that is required to be done is to dump the dredging under the direction of the United States engineer.

## CHICAGO DRAINAGE CANAL.

In order to widen the channel of the Chicago river the sanitary district of Chicago has undertaken an extensive piece of work extending from Adams to Van Buren street, Chicago. The by-pass at the west side of the center pier of the Adams street swing bridge will be dredged so as to afford a channel 50 feet wide. At present, this by-pass is filled in with earth and is occupied by the tracks of the Pittsburg, Fort Wayne & Chicago road. The excavation will be carried on without interference to trains on the railroad tracks, and the location of the tracks will not be changed. The excavated channel will be covered with steel girders and concrete arches to support the tracks. At Jackson street the excavation will extend under one corner of the P. F. W. & C. freight depot. At the Van Buren street lift bridge the channel will be widened about 30 feet on the west side, requiring a change in the approach span of the bridge, which will be accomplished by supporting the girders now in use on longer girders placed overhead.

## UP FROM THE SEA.

A telegram from Seattle says that a mountain more than 20,000 feet high, and therefore overtopping Mount St. Elias, has been found in Alaska. It is on the right bank of the Sushitna river and was measured by a party from the Geological Survey under G. H. Eldredge. He proposes to call it Bullshae, a word spoken in exclamation by the Indian guide when he first saw the peak. The members of the survey think that an ascent of Bullshae would be almost impossible on account of the precipitous sides.





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CLEVELAND, O., OCTOBER 20, 1898.

ACCORDING to the government reports of the stage of water on Lake Superior, prepared by J. H. Darling, of the United States Engineering Corps of Duluth, it was better during September than it has been before in the month of September for the past twenty-six years. During that month of this year it was 0.10 of a foot higher than it was during the preceeding month, and 0.32 of a foot higher than in September of last year. The stage of water for September of this year was 0.23 of a foot higher than the average September stage for twenty-six years.

THE production of iron ore in 1897 was the largest in the history of the country, amounting to 17,518,046 gross tons, an increase of about 9½ per cent. over that of 1896 (16,005,449 gross tons). The production in 1895 amounted to 15,957,614 tons, and in 1894 to 11,879,679 tons. In 1897 the Lake Superior mines of Michigan and Wisconsin alone shipped 6,904,448 tons of ore, and the Vermillion Lake and Mesaba mines of Michigan added to this 5,559,345 tons, making together 12,463,793 gross tons, more than 71 per cent. of the total production in 1897, and more than the entire production in the United States in 1894.

THE Scotch returns for last month show that 27 vessels, aggregating 42,037 tons, were put into the water during October by Scotch yards. Twenty-three of these were steamers equal to 41,797 tons, the remaining tonnage going to four barges. Last month shows well compared with the previous month, when only 20 vessels, of 29,514 tons were launched from the North British yards. To last month's total the Clyde contributed 38,149 tons, the Forth 3,215 tons, the Tay 490 tons, and the Dee 183 tons. During the nine months ending September 30, Scotch builders have launched 316,300 tons a record only passed once in the decade, 319,510 tons, having been put into the water during the same period of 1892.

THE reports that the Federal Steel Co.—the combination of the Illinois Steel and the Minnesota Iron companies—with \$200,000,000 capital, is figuring on a mammoth shipbuilding plant, may be a figment, but it is the kind of a figment that two years ago would have been scouted as absurd where it is now received as probable. Not only is there a notion abroad in this country that the time has come for the up-building of a merchant marine, but in Europe as well such a development is expected. A writer in the London Times recently pointed out that our shipbuilders were driven out of business by their inability to build iron ships in competition with British builders, but that to-day we are exporting plates and frames to Glasgow and Belfast, so that it is absurd to suppose that we cannot now successfully compete with foreign shipyards.

## HEAVY FREIGHT MOVEMENT.

October will be the heaviest month in the history of the head of the lakes as regards the receipts of wheat, flax, rye and barley. Already the aggregate receipts of these kinds of grain are almost as great as for the entire month of October, last year. The aggregate receipts for the month up to Monday, October 17, were 14,587 cars, as compared with 15,938 cars for the entire month of October, last year. Chairman Kelly, of the Lake Superior Car Service Association, said that he looked to see the aggregate receipts of wheat, rye, barley and flax amount to 25,000 cars this month, which will break all previous records for a single month since Duluth became a receiving and shipping point for grain.

The wheat rate, Duluth to Buffalo, is strong at three cents, but there has been no advance for several days. The announcement that shippers of ore and other commodities will curtail the movement of lake traffic as much as possible if the rates continue to ascend has had its effect to some extent. It is not to the interest of the vesselmen to have the volume of business curtailed when the rates are profitable, and they are not bringing as much pressure to bear as they were to shove rates upward since the shippers began talking about withholding as much freight as possible. It is believed that the shippers of ore will stand the \$1.00 rate under the circumstances.

The heavy movement of lake and rail business at the head of the lakes is not a purely local condition. At Chicago it is said that there was never before witnessed such an immense volume of freight, both lake and rail and all rail. The warehouses there are filled with freight, and the lines are kept hustling in receiving and forwarding it.

## DECLINE OF BESSEMER STEEL.

One of the most remarkable advances made in the steel industry has been that of the open hearth, or Siemens process, which, according to statistics just issued, has made such wonderful strides in the past few years that it promises to completely revolutionize the trade. When Sir Henry Bessemer invented the process that bears his name it was thought that the limit had been reached, and that no better process could be discovered for the refinement of steel. His name was placed on an equal footing with the inventors of the steam engine and the telegraph, and the civilized world rang with praises for the man who had made this discovery. But while his glory was yet at its highest point, Siemens quietly invented the open hearth process. The world did not ring with praises for him, and to-day his name is comparatively unknown, for it was supposed that his invention was superfluous.

During the last six months the open hearth process has come to the front more rapidly than ever before, and with it has come the decline of the Bessemer products. The Iron and Coal Trade Review, of London, an accepted authority on all matters relating to the manufacture of steel, goes so far, in its last issue as to state that the invention of Bessemer steel might now be dispensed with, so completely is the open hearth products taking its place. This statement, too, is made by an authority of a country that is slow, but surely seeing its laurels wrested from it, for the manufacturers of the United States were the first to successfully use the open hearth process, and to-day this country is making more and better steel after the Siemens invention than any other nation on the face of the globe. Great Britain is also pushing aside the Bessemer process and producing large quantities of open hearth steel, realizing fully well that they must use the latest invention if they hope to retain any of the trade that is so rapidly slipping from their grasp.

The immense steel plants of Pennsylvania, Ohio and Illinois are invading new territories every day, and so satisfactory are their products that a permanent market is established wherever their products are sold in foreign countries. This, with the acquisition of our new territories, cannot help but make the United States the greatest steel producing country in the universe.

## ROBBING THE UNDERWRITERS.

A special dispatch from Houghton, Mich., as published in the lake dailies reads as follows: A wreck is a stroke of good fortune for the people who live on Keweenaw Peninsula. They are still burning kerosene oil that came ashore from a wreck fifteen years ago, and the loss of the Colorado this fall has sent enough flour to their doors to last a lifetime. The British Fire and Marine Insurance Company, which had the risk on the Colorado's cargo, has obtained several hundred barrels of flour from David Kingston, who

combed the beach for the flotsam. Kingston at first refused to return the flour, or pay anything for it, although the insurance company offered him one-half value for salvage. When legal steps were instituted he changed his mind, however, and accepted one-third value for salvage. It is doubtful if half of the missing cargo will ever be recovered, as it was promptly secreted by the people who secured it.

The foregoing smacks of the old wrecking times when on certain coasts vessels were lured ashore by the exhibition of false lights, etc.

## MATERIALS FOR BIRMINGHAM'S STEEL PLANT.

In the announcement made some months ago, of the decision to build a large steel plant at Birmingham, Ala., it was stated that basic pig iron was to be furnished the Alabama Steel & Shipbuilding Co. by the Tennessee Coal, Iron & Railroad Co. practically at cost. The contract on this subject has just been recorded. It provides that in consideration of \$440,000 of the preferred stock of the Alabama Steel & Shipbuilding Co., the Tennessee Coal, Iron & Railroad Co. agrees to furnish the former for a period of 30 years, commencing July 1, 1899, all pig iron, coal, coke, ore, limestone and dolomite necessary for its operation, the maximum quantity to be sufficient for the production of 1,000 tons of steel per day. The price to be paid is 10 per cent. less than current market price. The gas from 120 by-product coke ovens is to be supplied free of charge. Should there be failure on the part of the Tennessee company to perform its part of the contract, the steel company is authorized to supply itself with needed material from the mines, quarries and furnaces of the Tennessee company.

The stockholders of the Tennessee Coal, Iron & Railroad Co., on Sept. 15, approved an agreement whereby the company is to receive \$1,100,000 first mortgage 6 per cent. bonds of the Alabama Steel & Ship Building Co.; also \$440,000 of the 6 per cent. preferred stock of the same company. The stockholders also approved an agreement between the company and Messrs. Moore & Schley, by which bonds and stock of the steel company are to be transferred to the syndicate in exchange for cash to be provided for the construction work. The syndicate managers above named, offer, on and after Oct. 17, to receive from Tennessee Coal, Iron & Railroad Co., stockholders, subscriptions for the Alabama bonds and stock, guaranteed by Tennessee Coal, Iron & Railroad Co., upon the basis of \$1,000 cash for \$1,000 bonds and \$400 preferred stock. Twenty per cent. of each subscription is to be paid upon the acceptance of subscription and subsequent payments not exceeding 10 per cent. per month thereafter. The total possible subscription of \$1,100,000 is a little less than 5 per cent. of the total stock of the company.—Iron Trade Review.

## THE COMMERCIAL OUTCOME.

The foreign trade of the United States is expanding steadily. The last fiscal year was record-gainer in our foreign trade, in two things—its total volume, and in the excess of exports over imports. We have only the returns for the first quarter of the present fiscal year, embracing July, August and September. For these three months our exports were \$247,585,271, against imports of \$148,911,939, a balance of \$98,674,332. In 1897 this quarter showed exports of \$256,469,930, against imports of \$135,948,490, a balance of \$120,521,440. This relative loss of \$22,000,000 in balance is not significant, because it is more than accounted for by the cessation of wheat exports from exhaustion, following the Leiter break, and by the later failure of farmers to move the new crop. These two items alone would cover it, without counting in the lower price of cotton this year.

For the month of September there was in 1898 a loss of \$14,000,000 in exports, while imports increased nearly \$6,000,000, this month alone nearly covering the decrease in balance for the quarter, but with very heavy exports of wheat and cotton now going forward, and which promise to continue, it will not take long to set our balance on the up grade again.

## ANOTHER LAKE SUPERIOR CANAL.

A dispatch from Lansing, Mich., says that the Secretary of State has received inquiries from Chicago capitalists, relative to the steps necessary for the organization of a company to construct a canal from Bad de Nocquet to Lake Superior, across Alger and Schoolcraft counties. This it appears would connect Lakes Michigan and Superior. The canal would be about 35 miles long and would save about 900 miles travel now necessary.



### THE LUMBER FREIGHT OUTLOOK.

Every lumber dealer will be well satisfied with the advance in rates on lumber, said a prominent Buffalo dealer, in speaking of the increase. "We appreciate the fact that with the advance in grain freights it is impossible to obtain proper tonnage for lumber at the old prices.

"Then again sailors' wages must be advanced. Of course it is understood that the captains, mates and engineers, are employed by the season, so that so far as they are concerned wages will be equal, except in the matter of sailing vessels.

"From a prominent point in Buffalo I noticed a large fleet of sail vessels going up the lakes, a sight most infrequent during the last few years. I imagine that the said vessels are again in evidence with the advance in tonnage both up and down.

"Withdrawal from the lake trade of so large a tonnage for Atlantic coast business may have stimulated freights to an extent, yet the legitimate demand for freight tonnage has a greater effect in advancing carrying charges than the withdrawal mentioned."

"We have 7,000,000 feet of lumber on Lake Superior," said another dealer when questioned regarding the effort to advance the lumber rate to \$2.50, "which if rates should go to \$2.50, would be left to winter where it is, so that while an increase might seem at first view to be an advantage to the carrier, in the end it would prove a disadvantage by reducing the amount of shipments materially. We will carry some lumber at the present advance, but the condition of the market will not compel us to move the stock should rates go higher. There are many other dealers similarly situated, and you can see what would be the result of forcing up the rate to \$2.50.

"It is the prevailing view of lumbermen that with the present rates for carrying on the lakes the price of lumber must advance. An indication of this is the fact that some large offers of lumber, made by Superior dealers a few days ago, have been withdrawn."

### A YACHT DESIGNER.

Fred W. Martin, North Chicago's yacht designer, is in receipt of a letter from F. W. Brainard, purchasing agent of the Argo Mining Company, whose office is in Chicago, to the effect that the Argo, built for the company by Mr. Martiu far exceeds the most sanguine expectations of the purchasers.

The Argo has proven to be one of the staunchest and fastest boats in Alaska. On her voyage up the Yukon from St. Michaels Island to the Koyukuk river she overtook and passed steamers that started several days ahead of her, although she was heavily loaded and towed a fifty foot barge.

Mr. Martin was called to Chicago on Saturday in regard to the design of a vessel of the same type as the Argo, but larger, being 100 feet long with a thirty-five feet beam, and will have so little draft that she will be able to navigate in eight inches of water. She will be fitted with centrifugal pumps, and will in other ways be similar to the Argo, and for this reason Mr. Martin is in consultation with the mechanical engineer who furnished the power and plant for the former craft.

The designer attributes the fact of the Argo's speed to his entire abandonment of the Mississippi river steamers type of bow, and substituting a spoon bow, entirely cut away forward and gradually working into a heavy displacement middle body and a comparatively clean run.

### LIFE SAVERS RENDER ASSISTANCE.

The Canadian schooner Selkirk was sighted flying signals of distress off Thunder Bay Island, on Wednesday morning. The life-saving crew went to her assistance, and found that the vessel had three feet of water in her hold, and her rudder was gone. She was bound from Fort William to Kingston with 60,000 bushels of wheat, and was being towed by the steamer Rosemount. After entering Lake Huron the tow encountered the northeast gale, and the Selkirk broke away from the steamer. She was towed into Alpena by the tugs John Owen and Frank W. Steam pumps kept her free. Temporary repairs will be made and she will leave when the weather permits.

For forty-eight hours, the life-savers of Thunder Bay Island, under command of Captain Persons, have been without sleep, and are heroes in saving life. Their work in taking the crew from the schooner Herschel on Tuesday is deserving of high praise. It is reported that the Herschel has gone to pieces.

### SYSTEM OF LIGHTS.

The St. Lawrence river steamboat men are trying to inaugurate a movement for a better system of lights and buoys for the river in view of the increased depth of canals. These improvements will allow deeply loaded boats to go to Montreal, and much fear is expressed that the trip will be very dangerous, with the present lights.

### PHILADELPHIA BOARD OF HEALTH APPROVES THE KENNEY FLUSHOMETER SYSTEM.

The Philadelphia Board of Health, after a thorough investigation, have amended the building laws so as to permit the installation of the Kenney system, by which one tank is used to supply one or more closets, instead of individual tanks, as was formerly required.

### CANADIAN RESTRICTIONS ON LUMBER.

Charles Mould, of the firm of W. & A. McArthur, of Cheboygan, when passing through Detroit on his way to the Georgian Bay district, where the firm has large interests, is quoted as saying "we will do just enough this winter to keep the teams and men busy—just enough to keep things over there from getting rusty." The result of the Canadian restriction is that there will be very little lumbering on Georgian Bay this winter, and most of the mills on the Michigan side of Lake Huron will be idle next summer. Michigan firms got out about 300,000,000 feet of logs in Canada last winter. This winter they may cut one-third of that amount, and about one-fifth of the cut will come to Michigan. Unless the two countries adopt some reciprocal measure the saw mills in Michigan will have to go out of business.

### CHEAPENING IRON PRODUCTION.

From the great advantages given the manufacturers they now make pig iron at Pittsburg 50 per cent. cheaper than they could ten or fifteen years ago. These facilities combined with great abundance of cheap supplies, have reduced the price of Bessemer pig iron from an average of \$22 a ton in the years 1880-85, to an average of less than \$10 a ton, 1892-98. And this also means cheap billets, rails, machines of every kind. It means a rapid and healthy expansion of export trade in iron and steel, something that we are seeing accomplished everywhere. While the south, by reason of her iron and coal being in juxtaposition, makes good foundry iron at a cost below \$6 a ton, the north, by annihilating the obstacle of distance, reduces the cost of her steel output, by one half, in less than two decades. Of course other factors come in here. Better furnace construction, improved "practice," the numerous labor-saving appliances in vogue—all these are more or less important, but the great item in the country's colossal steel trade is the cheap means of assembling the raw materials.

### REDUCED ORE OUTPUT.

Exact figures regarding iron ore shipments from the entire Lake Superior region to October 1st have been published and it is now quite certain that the 1898 output will not be much in excess of 13,000,000 gross tons, although it was expected when the season opened that the total would be 14,500,000 tons. This estimate was dropped more than two months ago, when it was found that labor was getting scarce everywhere in the mining region, but it was not thought that the output would be cut down still further on account of high freights, as has been the case during the past six weeks. September shipments are 243,981 tons short of the shipments in September, 1897, but the shipments of the season thus far are still 1,186,630 tons in excess of last year, as the output of October 1st aggregated 10,994,201 tons, against 9,807,571 tons on October 1, 1897. More ore might be sold and the output would undoubtedly be increased without sales but for the steady advance in lake freights, due to an immense movement of grain.

### A ST. CLAIR RIVER COLLISION.

The steamer W. H. Sibley lies sunk at the foot of Stag Island, St Clair river, as a result of a three-cornered collision which took place between her and the steamers Lansing and Northern King Sunday morning. The Lansing is leaking badly. The Northern King is but little damaged. The Sibley and Lansing both coal laden, were bound up, and met the Northern King with grain bound down. The King attempted to pass between the two upbound boats, which were nearly side by side. The Sibley took a sheer and struck the King on the starboard quarter. She then struck the Lansing a blow with the bluff of her bow, break-

ing the rail on the port side and some of the planking. The bows of the Sibley were badly damaged and her crew had barely time to get their boat into shallow water on the Canadian shore when she sank. The Lansing and Northern King both proceeded on their way. The Sibley is reported as lying deck to on the Canadian shore. The wrecking tug Saginaw, with full outfit was immediately dispatched under the direction of Captain J. V. Tuttle, who represents the McCurdy insurance syndicate, to raise the Sibley, and she is probably now afloat again.

### TO INCREASE OUR NAVY.

The full extent of the programme for increasing the naval establishment is set forth in a statement made this week by Chief Constructor Hichborn, although it is not shown in the appended table, which only mentions those vessels authorized in the last two years and now actually well advanced towards readiness for service. Constructor Hichborn makes the statement that never in the history of the American navy have there been more tonnage and money engaged at a given period in enlarging the navy than at present, and that by the end of three years the service should almost be equal in fighting strength to that of Italy, now ranked third among the powers. Congress at its last session provided for three battleships, four coast defence monitors and twenty-eight destroyers and torpedo boats, and the contracts for all have been awarded. In addition there are now building at the various shipyards, five battle-ships, ten destroyers and torpedo boats, one practice ship, one submarine boat, two navy yard tugs, and the Albany, sister vessel of the New Orleans, still in the hands of her English builders, but expected to be in readiness by next March. The progress of the work shows great activity at all yards, the present state of the vessels being as follows:

Battleships—Kearsarge, 68 per cent.; Kentucky, 66; Illinois, 55; Alabama, 63; Wisconsin, 48.  
Torpedo Boats—Rowan, 99; Dahlgren, 90; T. A. M. Craven, 81; Farragut, 97; Davis, 99; Fox, 95; Mackenzie, 99; Stringham, 48; Goldsborough, 28; Bailey, 37.  
Submarine Torpedo Boat—Plunger, 85.  
Tugs—Penacook, 65; Pawtucket, 60.  
Training Vessel—Chesapeake, 30.  
Cruiser—Albany, 75.

### CAPT. WALLACE.

Capt William Wallace, late of the steamer Vega, died on Sunday.

When the steamer cleared from Buffalo for Duluth Saturday evening Captain Wallace complained of not feeling well. The matter was not considered serious and the steamer started for Duluth. Shortly after they left the docks at Buffalo he became so ill that the boat returned to port and the captain was taken to the Homeopathic Hospital where everything possible was done to relieve his sufferings, but the efforts to save his life proved unsuccessful and he expired Sunday morning. The cause of death was cerebral congestion.

Capt. Wallace, was the son of David Wallace, of Lorain, and was well and favorably known in marine circles.

### SEAMEN PUT WAGES UP.

Members of the lake seamen's union voted this week for a 25 cent increase per day in the scale of wages. The new scale does away entirely with trip wages. Similar action was taken by the branches of the union in Milwaukee and other lake ports. Heretofore the seamen have been receiving \$1.75 per day, but in the future all members of the union will demand \$2. The seamen expect no trouble with the vessel owners, many of them having already agreed to the increase.

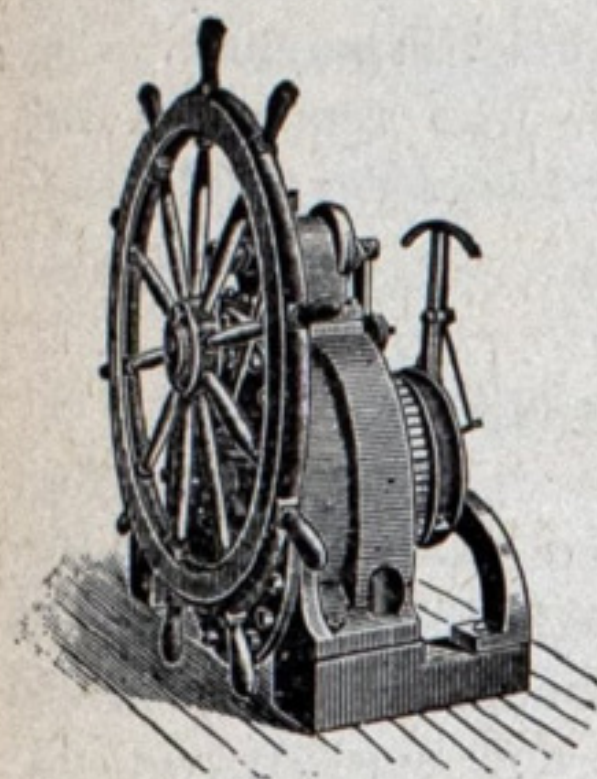
"Seamen have not been so scarce in the lake ports in years," the Chicago union secretary says: "Several vessels have been delayed in going out because of the lack of men to take care of the increased business in lake traffic. Many of our members are in the United States Navy, having enlisted when the war broke out, and this, together with the fact that many new vessels are going into service, makes a great demand for good seamen. The outlook of the shipping interests in my opinion has not been so bright in years."

### STILL AN OBSTRUCTION.

The contractors at work removing the wreck of the steamer Toledo from the entrance to Portage Lake ship canal wrongly announced that the channel had been cleared, as the wreck is still dangerous to navigation. The wrecking outfit instead was sent to the steamer J. H. Farwell, ashore at Copper Harbor.



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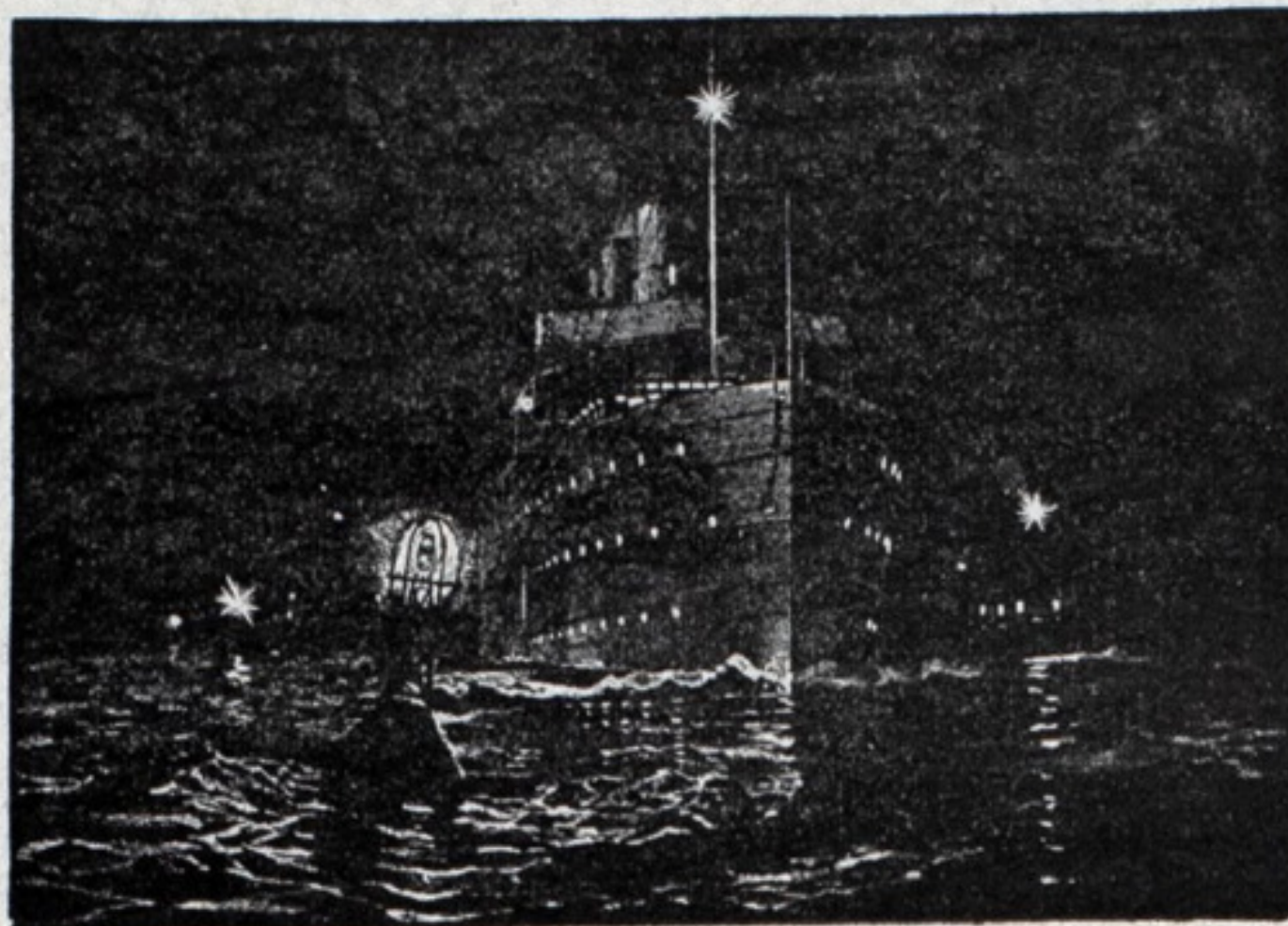
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160 Broadway, New York City.

## Straits of Mackinac Chart

The Hydrographic Office has just issued a new survey of the Straits of Mackinac, extending from Sturgeon Point and Thunder Bay on the East, to a meridian running through Point Betsie on the West.

This survey is the latest and best. The chart is on a large scale, measuring about 3x4 feet. Price \$1.00.



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### NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—OHIO.

TREASURY DEPARTMENT,  
OFFICE OF THE LIGHT-HOUSE BOARD,  
WASHINGTON, D. C., October 15, 1898.

**MAUMEE BAY STRAIGHT CHANNEL, RANGE LIGHT-STATION.**—Notice is hereby given that, on or about October 10, 1898, three fixed white lights, each of the fifth order, were established in the two towers recently erected on the axis of the straight channel in Maumee bay, dredged from Lake Erie into the mouth of the Maumee river. Each tower is protected by a V-shaped pile work.

**EASTERLY RANGE FRONT AND WESTERLY RANGE REAR LIGHT.**—The focal plane of the light is 42 feet above mean lake level, and the light should be seen about 13½ miles in clear weather, the observer's eye 15 feet above the water. The light illuminates 315° of the horizon and is visible from all points of approach excepting in the sector covering North Cape or Bay Point, between N. 80° 15' E. (E. 7/8 N.) and S. 54° 45' E. (S. E. 7/8 E.) (Bearings from a vessel.)

The tower is a red, square, pyramidal, iron, skeleton structure, surmounted by a square watch-room and octagonal lantern, each white with black hand-rails.

**EASTERLY RANGE REAR AND WESTERLY RANGE FRONT LIGHTS.**—These lights are shown from the same tower, 1,242 feet (¾ mile) S. 57° 45' W. (S. W. by W. 1/8 W.) from the easterly range front and westerly range rear light, described above.

**Easterly Range Rear Light.**—The focal plane of this light is 64 feet above mean lake level, and the light should be seen about 15¾ miles in clear weather, the observer's eye 15 feet above the water. The light illuminates 180° of the horizon to the eastward of S. 32° 15' E. (S.S.E. 7/8 E.) and N. 32° 15' W. (N.N.W. 7/8 W.), or 90° on either side of the range line.

The light is shown from an octagonal lantern on a square watch-room, each white with black hand-rails, surmounting the square, red, pyramidal, skeleton iron tower.

**Westerly Range Front Light.**—The focal plane of this light is 25 feet above mean lake level. The light illuminates 180° of the horizon to the westward of N. 32° 15' W. (N.N.W. 7/8 W.) and S. 32° 15' E. (S.S.E. 7/8 E.), or 90° on either side of the range line.

The light is shown from an octagonal lantern on a square

watch-room, each white with black hand-rails, in the second section of the tower.

**MAUMEE BAY RANGE LIGHTS.**—On the same date the two fixed white lens-lantern lights formerly marking the inner reach of the straight channel were discontinued.

Bearings are true.

By order of the Light-House Board :

FRANCIS J. HIGGINSON,  
Commodore, U. S. Navy, Chairman.

### NAVAL BOILER TROUBLES.

The British naval authorities are not alone in their difficulty in obtaining satisfaction from specially chosen makes of boilers for warships. It has transpired that the new fast cruiser *Entrecasteaux*, the first of the new class intended to offset H. M. ships *Powerful* and *Terrible*, and which has been rapidly pushed forward for service in the Far East, will probably not be commissioned for a long time to come. The boilers have been wrongfully constructed, and have developed such defects that they may have to be taken out and replaced. Before such a serious step is decided on, however, the vessel is to be subjected to another trial. It would appear that the present form of water tube boilers are not an eminent success for large tonnage, although there are a few that are excellent steam makers for moderate sized tonnage in the merchant service.

### RUSSIAN MERCHANT MARINE.

Under date of June 2, 1898, Consul Smith, of Moscow, writes :

A government commission was recently appointed to report on the Russian commercial marine. It stated that Russia loses yearly about \$37,000,000 through not having a sufficient commercial fleet of its own, and no progress seems to be made toward increasing the same. Companies from Lubeck, Hamburg, Denmark, England, France, Norway have already established agencies on the Baltic Sea and Arctic Ocean, and nearly all goods shipped from St. Petersburg and Baltic ports to Odessa and the Black Sea is done by ships of other nations. One remedy suggested is the removal of duty on vessels built abroad for Russia ; another is the admission, free of duty, of all material necessary for building vessels. It was decided that some steps should be taken in the near future to increase the commercial marine.

### EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co. report the eastern freight market as showing that the list of fixtures for grain indicate a very heavy amount of business transacted, at figures evincing a further advance from rates last reported and closing firm at the highest rates obtained. The inquiry is most active for prompt shipment, turning gradually into November and December, whilst the few charters made for shipment after the turn of the year show a marked decline in rates. The demand for prompt cotton tonnage from the Atlantic ports has become less urgent, and the enquiry is now turning into November. The gulf ports continue taking tonnage, and rates show as yet no perceptible decline, although the demand is visibly less acute. Time charterers, with pressing engagements on their hands, have continued falling in with owners' demands, but it is by no means an easy task to place under same, any boats not answering to required position and description of vessel needed. For outside trades the demand for steam tonnage is extremely light.

Since our last report business in sail tonnage has continued very light, and mainly confined to a few charters for oil to Europe and for coal to the River Plate, as per subjoined list. Transactions in other branches have been extremely scarce, and, with tonnage not plentiful and confronted by comparatively light enquiry, we can report nothing of interest, nor any change in rates.

### AN EARLY PROSPECTOR FOR COPPER ORE.

John Hays, of Cleveland, the father of the copper mining industry of the United States, passed his ninety-fourth milestone in life on Sunday. He is still a hale and hearty old man who likes to tell the story of his adventurous life and of his discovery of the fabulously wealthy copper deposits along the shores of Lake Superior. The Milwaukee Wisconsin says: In the early '40s. John Hays heard that missionaries among the Indians along the shores of Lake Superior had found traces of rich copper deposits, and he decided to try his fortunes in that country, which was then almost unexplored. He landed at Copper Harbor, and with two Indians as guides, traveled on foot from Copper Harbor to Green Bay, Wis., and then on to Milwaukee, prospecting all the time and sleeping on the ground with the Indians at night. Near Copper river, and on what is known as Hays' Point, he discovered the first great deposits of ore and later found



others near Eagle river. He gathered specimens which he took to Pittsburg and tried to interest capitalists in his discoveries. Finding no trouble to do this, he returned to Lake Superior and opened the mines which are now supplying the copper for nearly the entire world. Before this time all the copper used was supplied by England, and the process of smelting the mineral was unknown in this country. In 1847 Mr. Hays took a lump of ore weighing 3,852 pounds from one of the mines. This he took to England, where he went to investigate the smelting process, in order that it might be introduced in this country. When he arrived Englishmen were inclined to look upon his specimen as bogus, as they had been used to see only the fine ore, the particles being about like gravel. At first they refused to allow Mr. Hays to investigate the furnaces, but with true Yankee grit he persevered, finally obtaining an audience with one of the officials of the company and subsequently a good idea of the smelting process. The enormous piece of almost pure copper Mr. Hays presented to the King's museum in the strand, London, and to this day it is there on exhibition.

#### NEGLECT OF AMERICAN FIRMS.

The neglect of American firms to give proper attention to details in connection with foreign trade has been the source of considerable expense and loss of business. Consul Halstead, of Birmingham, sends to Washington a report which should be of interest to all who sell in foreign markets. He cites a number of instances where American manufacturers have consigned goods, perhaps of better, but not of the quality ordered. The English merchant, having given proper specifications, had a right to expect what he ordered and what his customers would buy, and the consignment was returned at the expense of the consignor. He also mentions the fact that he was shown sixteen letters from well-known American houses; twelve of them had been forwarded with insufficient postage, most of them having only a 2-cent stamp. The receivers had to pay double the deficiency in postage. Mr. Halstead also mentions other cases with regard to correspondence, bills of lading, telegrams, etc., which have caused and continue to cause American goods to

be frequently held up in foreign custom-houses. The systematic custom of English houses, which follow a telegram by a letter containing copy of same; also, forwarding duplicate copies of foreign letters by different steamers, is not, as a rule, observed by American concerns.

#### A BRITISH OPINION.

When, in 1888, the American Government called for tenders for its pioneer torpedo boat, the Cushing, only one firm felt competent to bid for the 22-knot craft. The Herreshoffs got the order, and at the last moment felt compelled to ask permission to substitute an English boiler, the Thornycroft, and with it the boat was accordingly fitted. For their next torpedo boat, the Ericsson, built in 1892, the U. S. Government could only get two bidders, and many were its breakdowns before achieving the stipulated 24 knots. This month the American naval authorities have received bids from fifteen firms for the construction of the twenty-eight "destroyers" and boats to form part of their latest group of torpedo craft, and as the names of several large firms are absent from the list, it may safely be said that there are now no less than twenty yards in the Union from which the U. S. Government could draw its supplies of these and similar vessels.

As with war vessels so it is with its merchant tonnage; the yards capable of rehabilitating the American mercantile marine have increased amazingly both in capacity and numbers during the past few years. According to Lloyd's returns of ships building in foreign countries, in 1891, the United States yards had on their stocks only 32,300 tons of shipping. Now, the William Cramp & Sons Co. alone have in hand for American account seven vessels, equal in all to 36,168 tons, and for foreign account three vessels aggregating 23,600 tons, and, in addition, four war vessels. Without going further into details we may say that seven other American yards now have in hand twenty-nine vessels for native owners, aggregating 72,000 tons, and six vessels of some 6,000 tons for foreign owners, without counting warships. When it is borne in mind that these figures relate

only to the first eight months of the year, include only eight firms, and are exclusively those of steamers, it is probably not too much to say that 1898 will see an addition to the American mercantile marine of 120,000 tons of native-built shipping.

#### RACE AROUND THE HORN.

The new steel ship Erskine M. Phelps, Capt. Graham, sailed Sept. 28th, for San Francisco from Baltimore, with 4,506 tons of coal. The ship Marion Chilcott left Baltimore on Sept. 24th for Seattle, and it is said that Capt. Graham and Capt. Weeden, of the Chilcott, have made a bet on the voyage. The Phelps is the first steel sailing ship built in the United States of steel made in this country. There is but one other steel sailing ship under the Stars and Stripes, but her plates were rolled in England. The Phelps is making her maiden voyage. She has four masts and was constructed by Arthur Sewall, of Bath, Me.

The Phelps is 330 feet long, 45 feet beam, and 26 feet depth of hold. She is now loaded with 4,506 tons of coal and draws 22 feet 4 inches of water. The four masts are of steel to the topmast, and 200 feet high. The lower yards are 95 feet long. The deck houses are of steel. The ship carries twenty-two men. She makes fourteen knots running free, and twelve knots close hauled.

The Chilcott has about 2,500 tons of coal aboard, and is on her first round trip out of San Francisco as an American vessel. She was formerly the British ship Kilbrannan, of Glasgow. While under the British flag she went ashore up north and pounded in her hull. She was purchased by Capt. Weeden and three others, for \$4,000, and made an American ship at a cost of \$24,000. On her first voyage the freight money amounted to \$32,000. The present cargo will bring the owners \$18,000.—S. F. Commercial News.

#### ADDRESS WANTED.

John Norvell, please write to Myles Maloney, 912 7th street, Port Huron, Mich. Important news. If anyone knows of Mr. Norvell's whereabouts, please advise above named.

41-45

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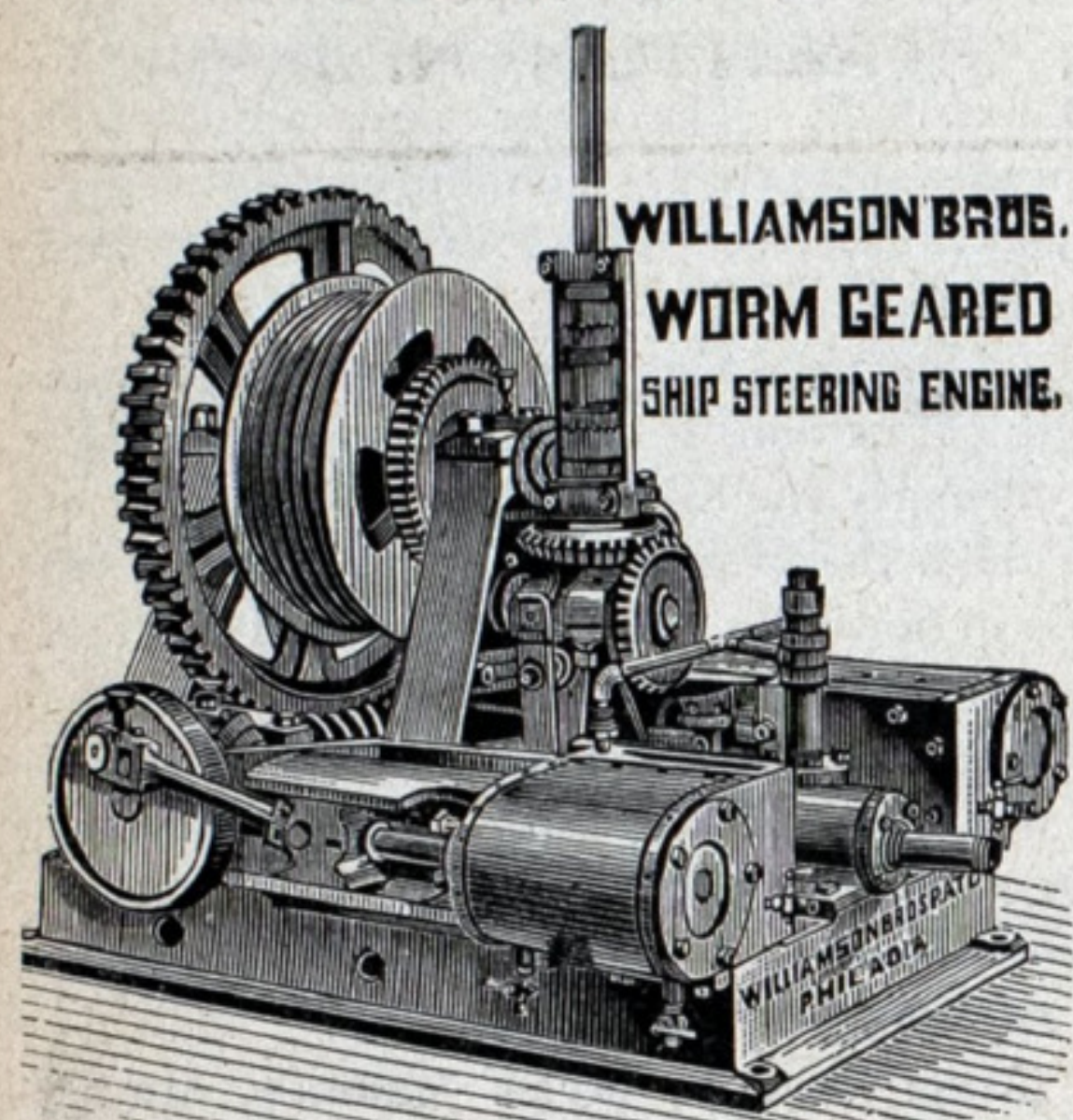


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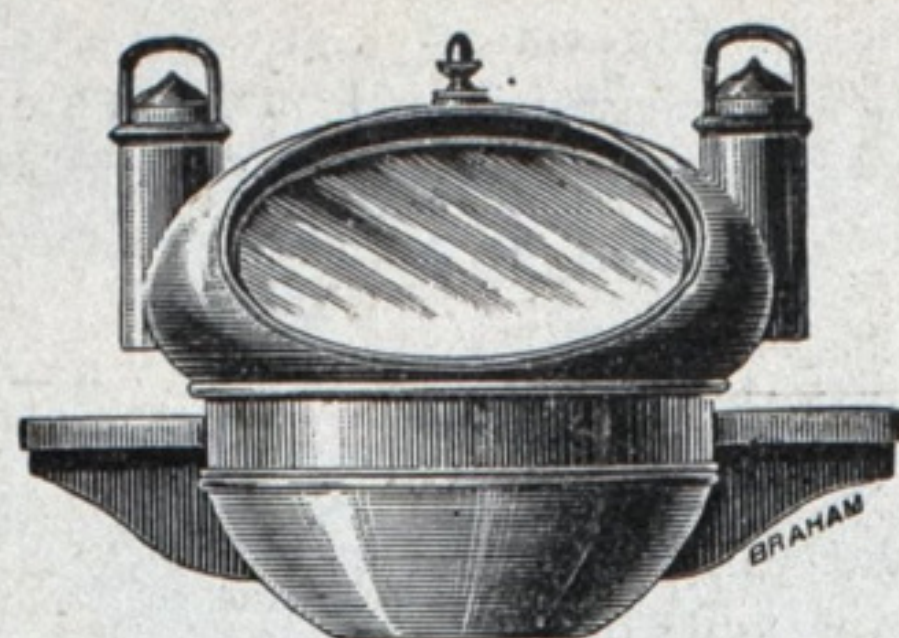
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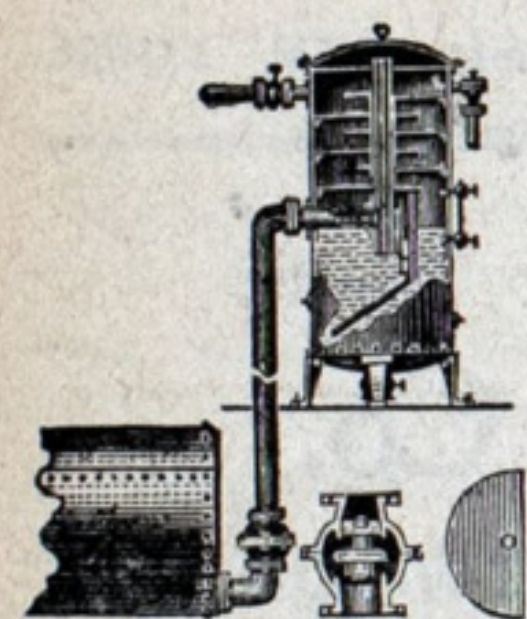
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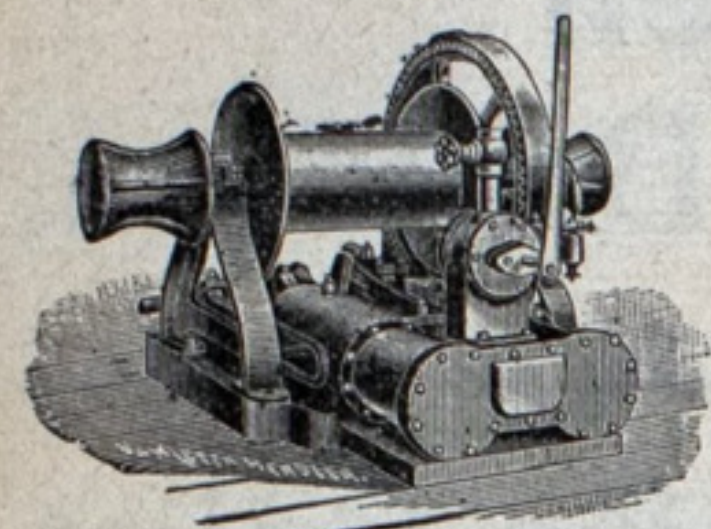
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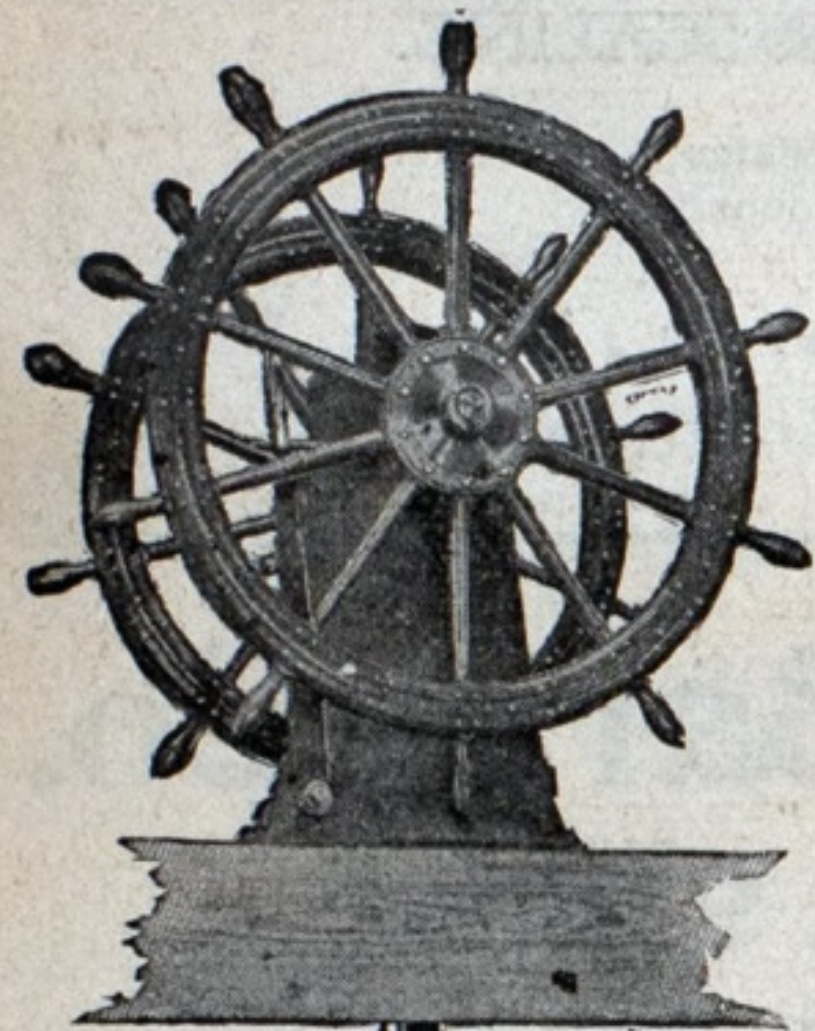
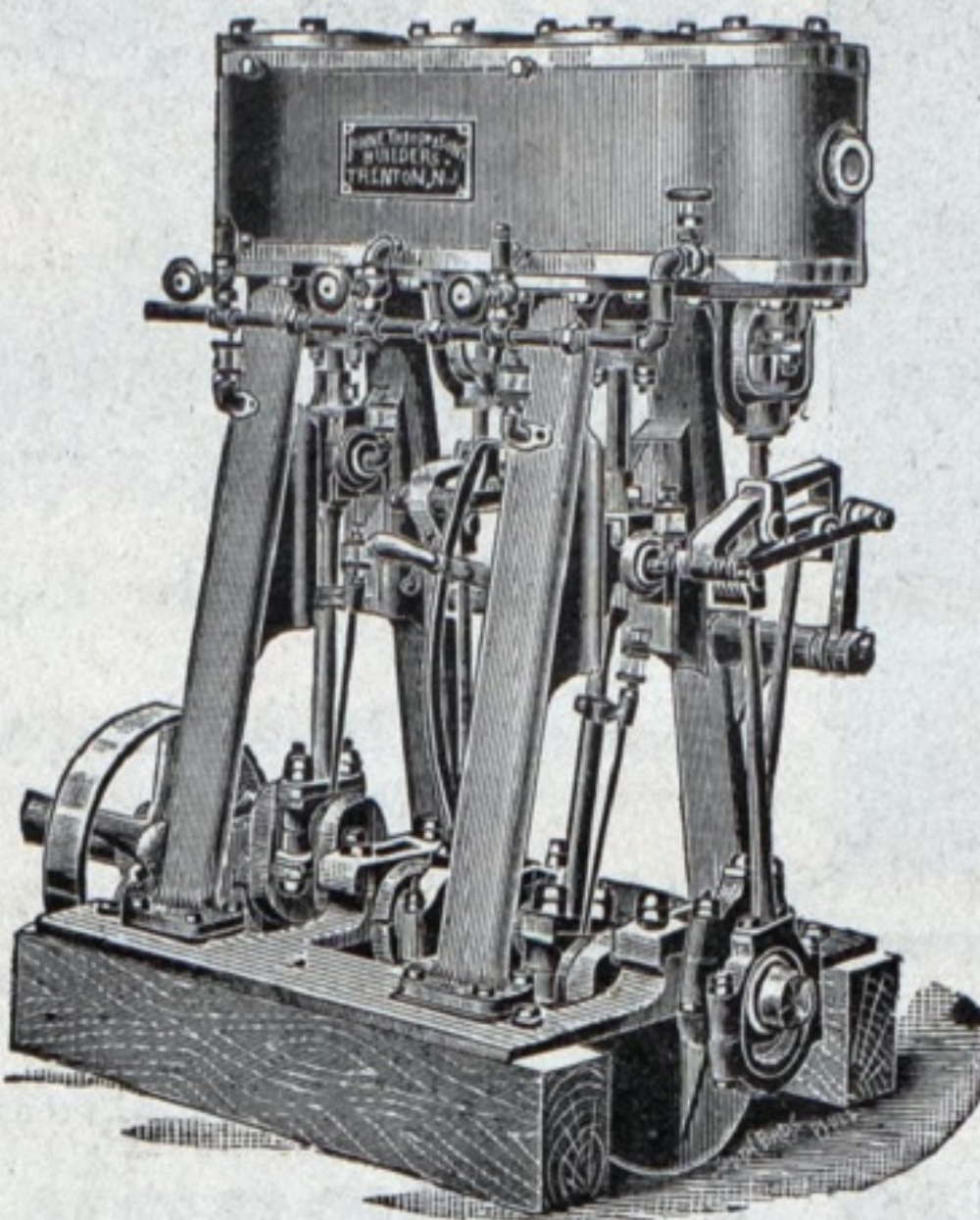
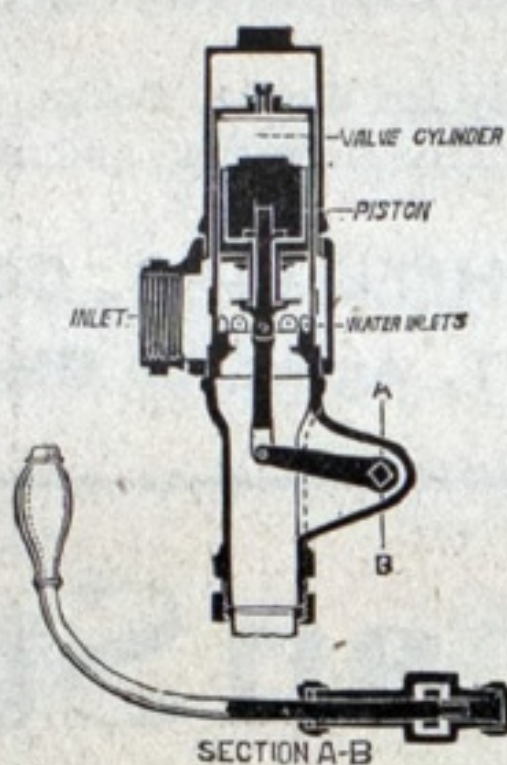
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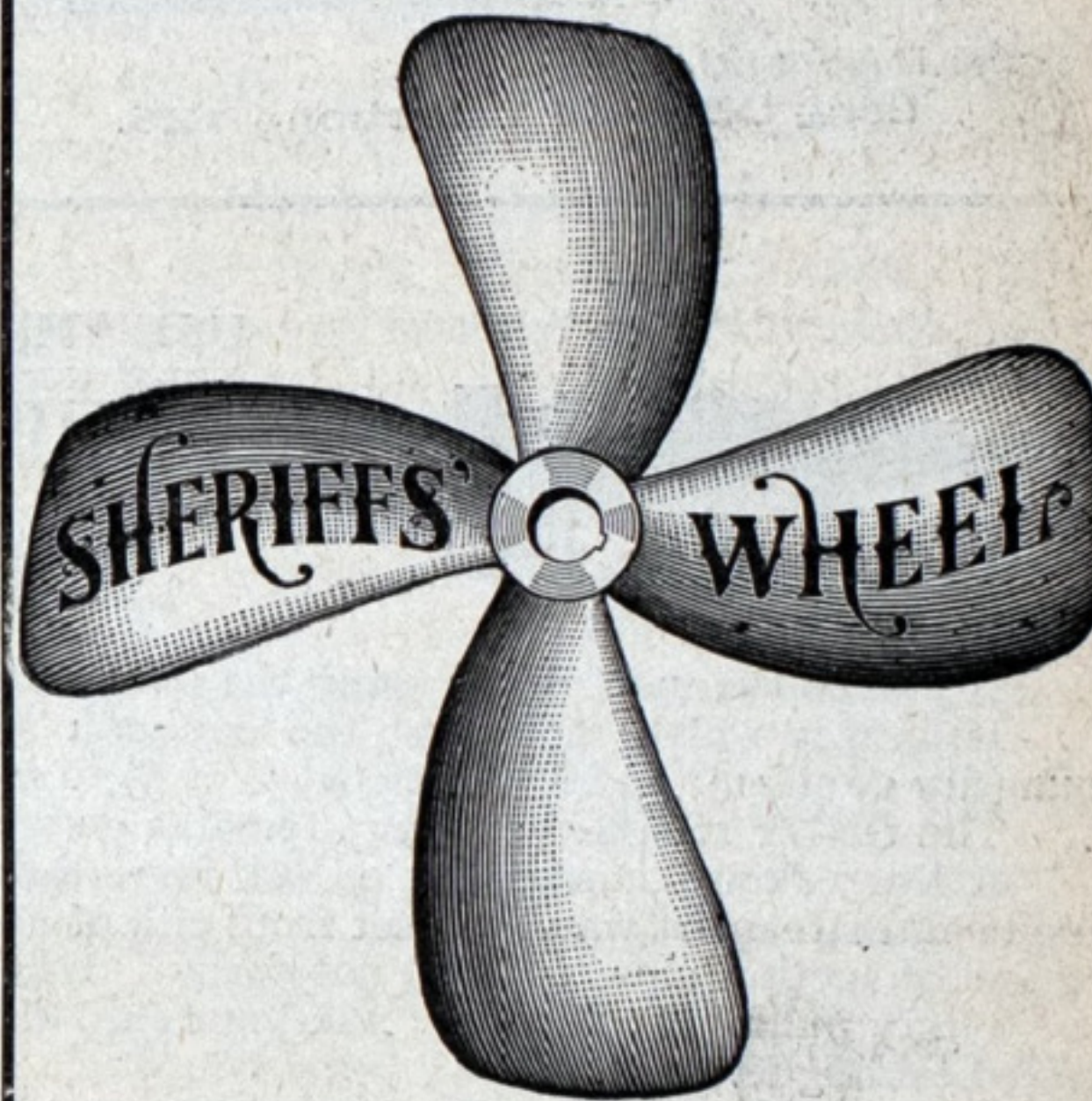
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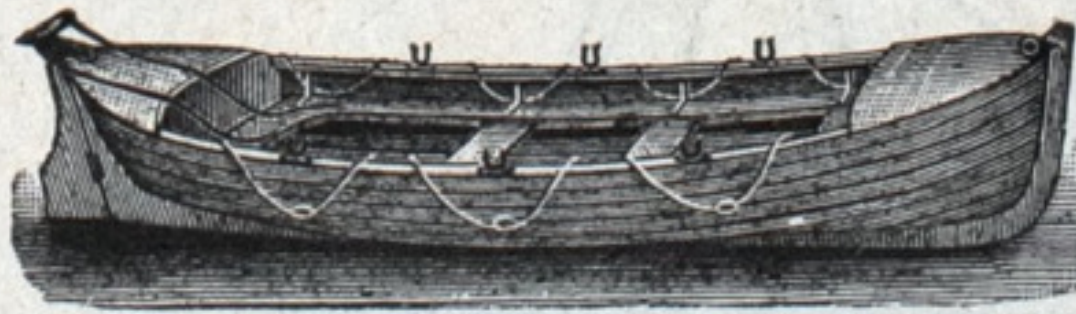
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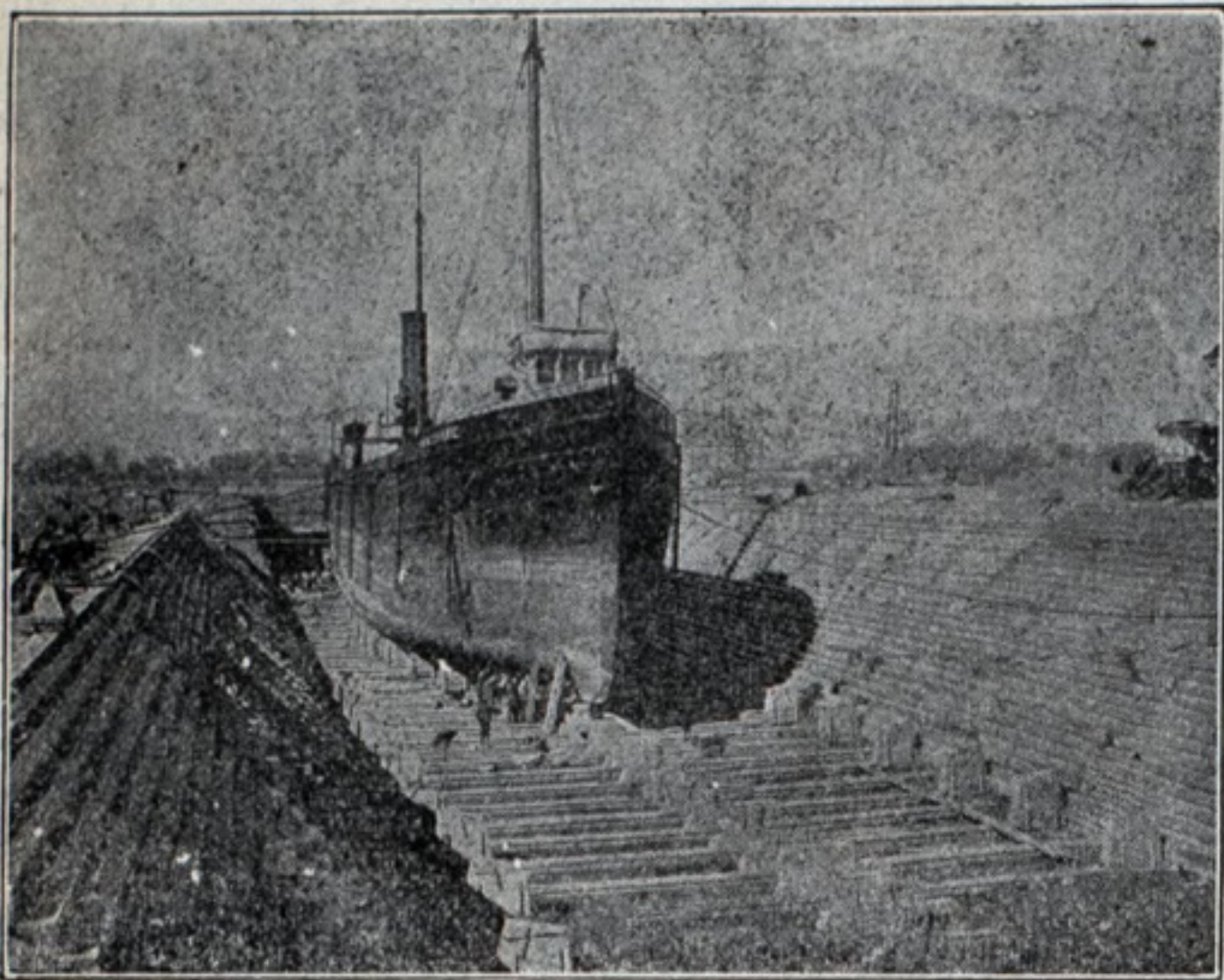
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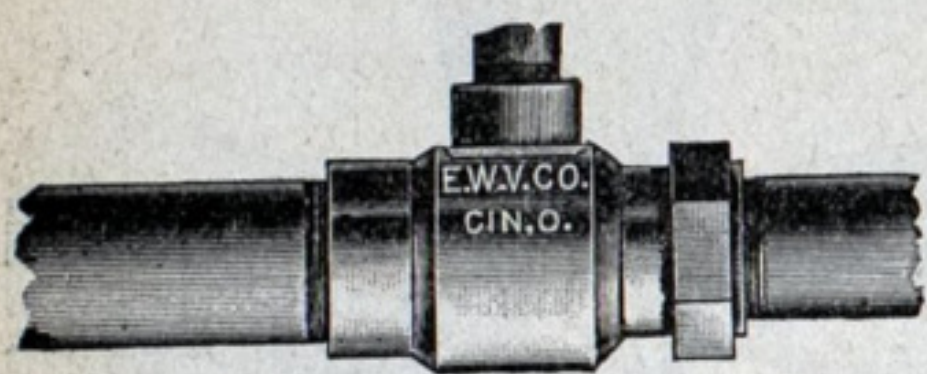


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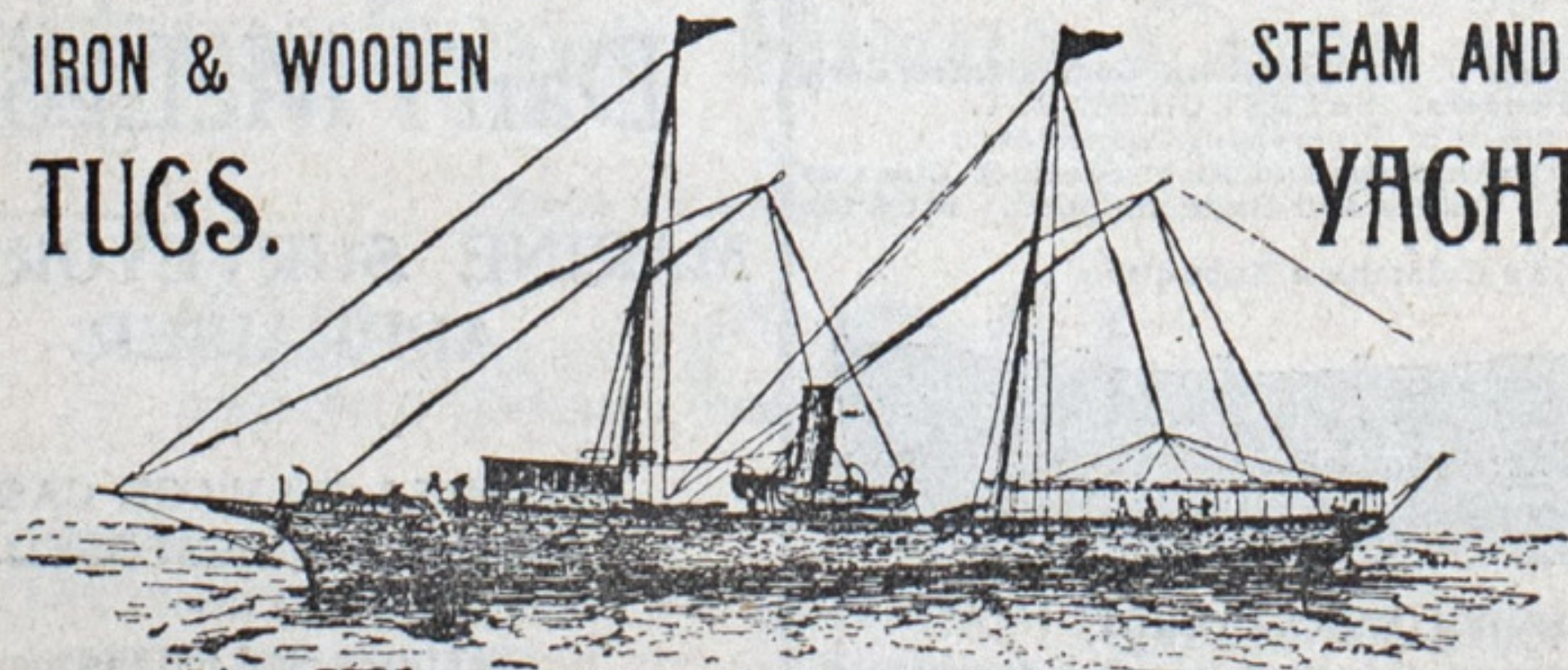
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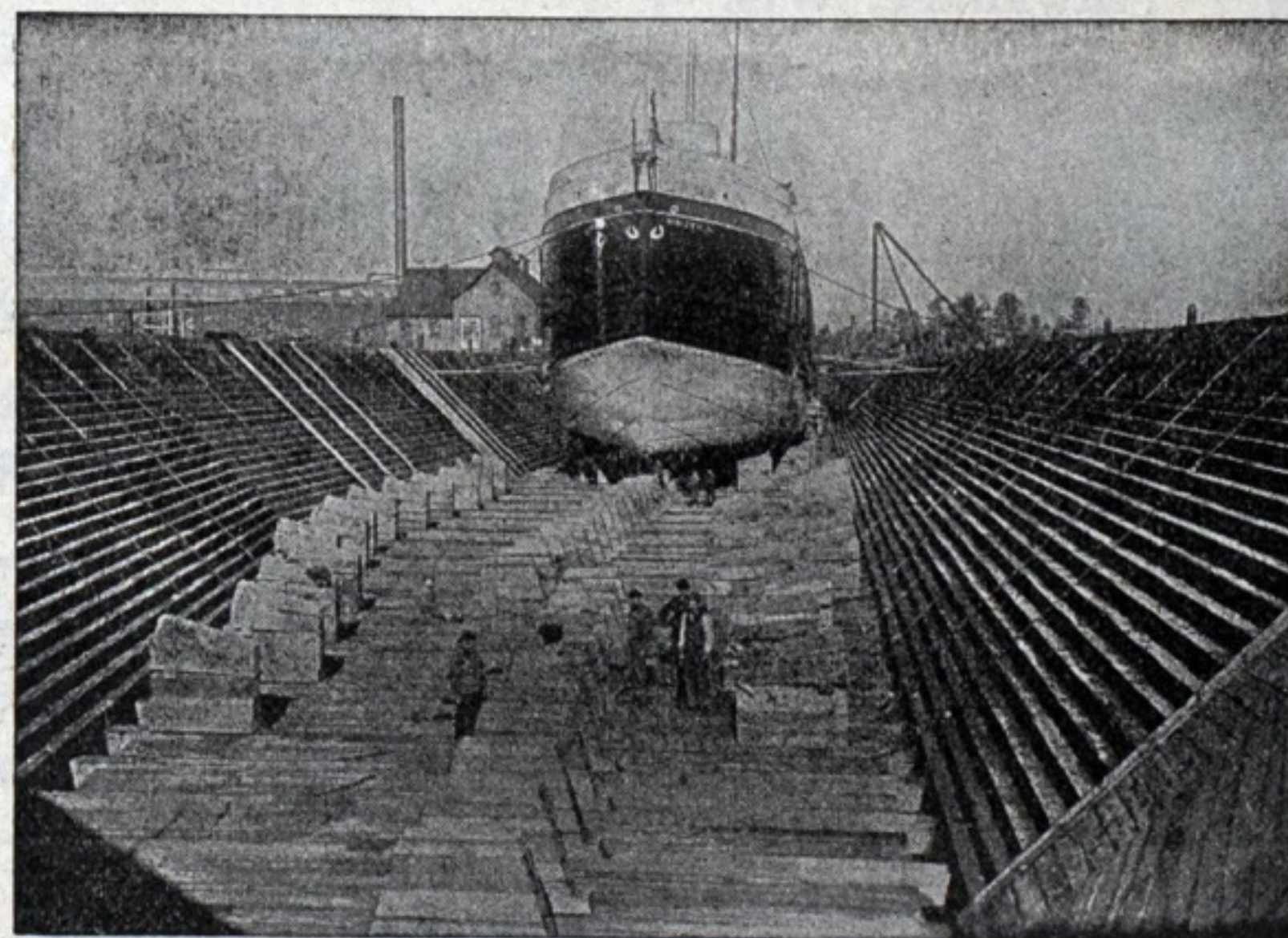
## American Steel Barge Co.

**STEEL AND METAL SHIPS**

Of all Classes built on shortest possible notice at our yards at WEST SUPERIOR, WIS., and also at EVERETT, WASH.

PHOTOGRAPH OF 300-FOOT BOAT IN DOCK.

Plates and  
Material  
always on  
hand to  
repair all  
kinds of  
Metal  
Ships in  
Shortest  
Time.



Best  
Quality of  
Oak in  
Stock  
for  
Repairing  
Wooden  
Vessels  
of all  
Classes.

### SIZE OF DOCK

Length, Extreme.....	587 feet.	Entrance, Top .....	55 feet 9 in.
Breadth, Top .....	90 " 4 in.	Entrance, Bottom.....	50 "
Breadth, Bottom.....	52 "	Depth over Sills.....	18 "

**LARGEST DRY-DOCK ON THE LAKES.**

Prices for Repairs and Docking  
same as at Lower Lake Ports.

**SUPERIOR, WIS.**

A Number of Propeller Wheels in Stock at Dry-Dock.

**BARRY'S—CHICAGO.**

....DON'T FORGET THAT....

## Barry Bros.' Independent Tug Line

Have a Wrecking Outfit. We have purchased the Grummond Wrecking Appliances, and are prepared to offer our patrons good service.

Office, 240 South Water Street.  
TELEPHONE, MAIN 273.

Three Long Whistles Call our Tugs.